

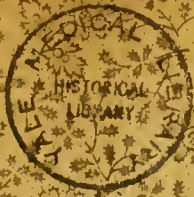


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PROCEEDINGS

OF THE

Connecticut Medical Society,

1880.

EIGHTY-NINTH ANNUAL CONVENTION,

HELD AT

New Haven, May 26th and 27th.

NEW SERIES. VOL. II.—NO. 1.

PUBLISHED BY THE SOCIETY.

C. W. CHAMBERLAIN, M. D., Secretary,

HARTFORD, CONN.

HARTFORD, CONN.:

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1880.

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The Connecticut Medical Society does not hold itself responsible for the opinions contained in any article, unless such opinions are endorsed by a special vote.

The next Annual Convention of the Connecticut Medical Society will be held in Hartford, the 4th Wednesday in May, and remain in session during the Thursday following.

OFFICERS OF THE SOCIETY.

1880-1881.

PRESIDENT.

GIDEON L. PLATT, M.D., WATERBURY.

VICE-PRESIDENT.

WM. DEMING, M.D., LITCHFIELD.

VICE-PRESIDENTS, *Ex-Officio*.

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M. C. WHITE, M.D.

ASHBEL WOODWARD, M.D.

SAMUEL HUTCHINS, M.D.

C. H. BILL, M.D.

R. S. GOODWIN, M.D.

C. E. HAMMOND, M.D.

CHARLES F. SUMNER, M.D.

TREASURER.

F. D. EDGERTON, M.D.

SECRETARY.

C. W. CHAMBERLAIN, M.D.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

W. A. M. WAINWRIGHT, M.D. L. S. WILCOX, M.D.

W. L. BRADLEY, M.D.

STANDING COMMITTEES.

On Examination.

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JOHN WITTER, M.D.
J. G. STANTON, M.D.
G. H. PRESTON, M.D.
D. A. CLEAVLAND, M.D.
H. S. FULLER, M.D.
C. E. HAMMOND, M.D.
ELIJAH BALDWIN, M.D.

Committee to Nominate Professors to the Medical Department of Yale College.

WM. DEMING, M.D. ISAAC G. PORTER, M.D.
G. W. RUSSELL, M.D. C. H. PINNEY, M.D.
R. S. GOODWIN, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

R. S. GOODWIN, M.D. B. N. COMINGS, M.D.
ASHBEL WOODWARD, M.D. G. L. PLATT, M.D.
L. HOLBROOK, M.D.

Committee of Publication.

C. W. CHAMBERLAIN, M.D. } *ex-officio*.
F. D. EDGERTON, M.D. }
G. W. RUSSELL, M.D.

Committee of Arrangements.

P. M. HASTINGS, M.D., *Anniversary Chairman*.
H. S. FULLER, M.D.
G. P. DAVIS, M.D.

Dissertator.

I. W. LYON, M.D.

Alternate.

N. NICKERSON, M.D.

PROCEEDINGS

CONNECTICUT MEDICAL SOCIETY — EIGHTY-NINTH
ANNUAL CONVENTION.

The President and Fellows of the Connecticut Medical Society met in the Common Council Chamber, City Hall, New Haven, at 3 o'clock P. M., Wednesday, May 26.

The President, Dr. A. R. Goodrich of Vernon, called the meeting to order, and appointed as the Committee to examine the credentials of the Fellows from the various county societies the Secretary, Dr. C. W. Chamberlain of Hartford, *ex-officio*, and Dr. Wm. A. Lewis of Plainfield.

The Committee reported that six Fellows had been elected in Fairfield county, but as Dr. Wilson was present he should retain his seat, as a full delegation of five were not present, in which case the place would belong to Dr. A. J. H. Smith of Bridgeport. In Middlesex county they reported that the name of Dr. C. A. Sears be substituted for that of Dr. D. A. Cleaveland, the former having been elected by the County Society, but through a mistaken idea of his powers the Clerk had reported the name of Dr. D. A. Cleveland.

At the request of the Fellows from New London county the name of J. D. Nelson was proposed as a Fellow from that county in place of A. W. Nelson, as he was present and the latter gentleman would not be. The report of the Committee was accepted, and the changes made as suggested.

LIST OF FELLOWS, *Ex-Officio*.

President.

A. R. GOODRICH, M.D., Vernon.

Vice-President.

G. L. PLATT, M.D., Waterbury.

Vice-Presidents, Ex-Officio.

S. W. Rockwell, M.D., East Windsor.
 M. C. White, M.D., New Haven.
 Ashbel Woodward, M.D., Franklin.
 Samuel Hutchins, M.D.,* West Killingly.
 C. H. Bill, M.D.,* Bridgeport.
 R. S. Goodwin, M.D.,* Thomaston.
 C. E. Hammond, M.D., Portland.
 Charles F. Sumner, M.D.,* Bolton.

Treasurer.

F. D. EDGERTON, M.D., Middletown.

Secretary.

C. W. CHAMBERLAIN, M.D., Hartford.

Committee on Matters of Professional Interest in the State.

W. A. M. Wainwright, M.D., Hartford.
 L. S. Wilcox, M.D.,* Hartford.
 W. L. Bradley, M.D., New Haven.

FELLOWS ELECTED IN 1880.

Hartford County.

G. W. Russell, M.D.	E. B. Lyon, M.D.*
H. S. Fuller, M.D.	J. N. Parker, M.D.*
	E. P. Swasey, M.D.

New Haven County.

L. J. Sanford, M.D.	C. H. Pinney, M.D.
N. Nickerson, M.D.	S. H. Bronson, M.D.*
	H. Fleischner, M.D.

New London County.

C. E. Brayton, M.D.*	J. D. Nelson, M.D.
C. M. Carleton, M.D.	F. A. Coates, M.D.
	George W. Harris, M.D.

*Absent.

Fairfield County.

Wm. G. Brownson, M.D.* W. H. Bunnell, M.D.
 A. S. Allen, M.D.* F. J. Young, M.D.
 F. M. Wilson, M.D.

Windham County.

William A. Lewis, M.D. Lowell Holbrook, M.D.*
 Lewis Williams, M.D.* John Cotton, M.D.
 Thomas Graves, M.D.

Litchfield County.

Wm. Deming, M.D. J. J. Newcomb, M.D.
 J. R. Sanford, M.D. B. S. Thompson, M.D.*
 F. W. Brown, M.D.

Middlesex County.

Rufus Baker, M.D. C. A. Sears, M.D.
 W. B. Hallock, M.D. R. W. Mathewson, M.D.
 A. W. Bell, M.D.

Tolland County.

Wm. N. Clark, M.D. Henry S. Dean, M.D.
 F. S. Smith, M.D.

The President then addressed the Convention as follows

Gentlemen, and Fellows of the Connecticut Medical Society :

Owing to a dangerous and protracted illness of several months, from which my recovery could scarcely have been expected, and is still delayed, I feel obliged to ask your kindly indulgence if I fail to make the usual annual address customary upon such occasions, or find myself unequal to the responsible duties of the office with which you have honored me.

I am aware that in later years it has been the rule for your president not only to make at the annual meeting a formal address upon some topic of general interest in practical medicine or ethics, but to open the meeting with a brief and concise statement of such matters as he may think worthy of the special consideration of the Fellows. To this, therefore, with your permission, I will confine

*Absent.

my remarks; and invite your attention very briefly to the consideration of the past, present, and future relations of the society to the public, *as a power in the Commonwealth.*

In every civilized State the medical profession, either individually or in its corporate capacity, is regarded as the wise and willing counselor of the government in all the complex questions and problems which are necessarily the attendants and outgrowths of the social relations of communities. Preëminent among these are all questions that relate to the public health, which is naturally endangered in proportion to the density of populations and their ignorance of sanitary laws, the establishment and administration of general hospitals for the sick, hospitals for the insane, almshouses and prisons, public buildings and their drainage and ventilation, systems of public sewers, the burial of the dead. In a word, the medical profession in every country is relied upon to aid and advise governments in the difficult problem of protecting society against itself.

In reflecting upon the past and more recent history of this society in its relations to the State, I am much impressed by the variety and the excellent quality of the work that it has accomplished as I find it duly recorded in our Proceedings, and so ably recited in various public addresses. You are not likely to forget and do not need to be again reminded of the general hospitals and hospitals for the insane, and the medical college that has been founded through your wise forecast and persevering efforts.

We are not likely to forget, either, the other instances in which this body has shaped the legislation of state into efficient enactments for the protection of society against itself; for the protection and humane care of those who cannot or will not care for themselves, for the custody and reformation of juvenile offenders; for the care and mental development of the imbecile and weak-minded. Nor do we need to be reminded of the laws for the collection and registration of Vital Statistics, or of the State Board of Health, the last and possibly the most important of any of the agencies for promoting the very highest interests of all the people of this State, which have had their origin in, and have been carried forward to completion by the nicely-directed influence of this society.

The fact, however, that we sustain the relation of parentage to so many good works that have blessed the State, carries into it a degree of responsibility for their continued usefulness; and the obli-

gation to maintain an intelligent and watchful interest in them all, to the end that they may be administered in harmony with the requirements of public policy, and in a manner that will most effectually promote the great interests which they are intended to secure.

In determining the degree and extent of fostering care and kindly criticism which may properly be exerted in these directions, we need no volunteer aid, and *cannot tolerate any foreign interference* with our domestic affairs, until our own incompetency is clearly demonstrated.

That we may not diminish the weight of our influence in shaping the future legislation of the State, as it may be required by the increasing intelligence and higher civilization of the people, it is of great importance that we withhold our aid from all schemes of doubtful expediency or questionable philanthropy.

The State Board of Health, still in the infancy of its existence, deserves to receive the active sympathy and support of every intelligent citizen. It has before it a brilliant future in the possibility of conferring upon the commonwealth benefits of inestimable value; and should at all times receive the ready coöperation of this society, in its wise efforts to promote by all lawful means the public health, and thus increasing, as no other agency can do, the value of life, and with it the great working capital of the State.

The progress already made in Sanitary Science in this country is very pleasing—twenty-three states have already established State boards of health; Iowa, New York, and North Carolina have since our last meeting fallen into line.

Preventive medicine, like conservative surgery, will be considered in the near future as affording the highest possible illustration of professional skill.

It was a wise act of the General Assembly to place under the administration of this board the collection and registration of Vital Statistics, already provided for by statute. There is, however, one very important, if not fatal, omission in the law, to which I beg to invite your critical attention.

It has fallen under my personal observation that in some parts of the State, and I presume it is true of a majority of the towns, the valuable records of Vital Statistics are not cared for in a manner at all appropriate to their very great and increasing importance. They are often left lying about in public view, open to public inspection and gossip; subject to being copied for improper purposes, liable to criminal mutilation and abstraction;

and even to the purloining of the books themselves. Instances of each of these abuses could be cited. It should be remembered that these records contain the private histories of all persons who are or may be born, married, or dead in the State; information which the public has no right to possess, and which the State even has no right to publish. Facts which should be regarded as strictly private, and upon which none but official eyes should ever rest. The statistical facts gathered for scientific purposes, are all that government has a right to use for public purposes; all the other facts are recorded for the benefit of individuals, and should be sacredly guarded as a private trust.

I am not aware whether the Board of Health considers it as any part of its duty to make and enforce such regulations as will effectually prevent the exposure and danger of loss or damage to which these records are now generally subjected. If not, I respectfully recommend that this society take the proper steps to secure for them adequate legal protection.

In view of the facts that have transpired in the State during the past year, I would call your attention to the free and unlimited sale of poisons, especially those more commonly used for suicidal and criminal purposes, whose indiscriminate sale should not be allowed in the State. Every safeguard that the law can provide for the protection of life, and the prevention of crime, should be furnished.

The present status of medical expert testimony is a reproach to the profession, and it is high time some steps were taken to remedy the most glaring evils connected with this subject. Either consciously or unconsciously the expert becomes the medical advocate of the person by whom he is called, instead of an impartial witness of the facts as best known to medical jurisprudence, and it is to be feared that too often the fee is made contingent upon the amount of damages secured through the testimony of the expert. Men too are summoned as experts that have no special fitness, either by position or acquirements, as experts in departments that require the devotion of a life-work to comprehend and elucidate, much more to decide *ex cathedra*.

Whether a judicious commission summoned by the court would best remedy these evils or not, requires careful thought and study. I recommend the whole subject to your most careful consideration, deeply impressed, however, with the necessity of some decided action to vindicate the honor and dignity of the profession and of this commonwealth.

It will probably occur to the minds of all present that, while this body has, in so many notable instances, beneficially served the State by shaping its legislation for the establishment of so many laws and institutions for the preservation or amelioration of some of the great evils that effect all communities not under the protectorate of science, there is still one great and growing evil for which we have as yet proposed no adequate remedy. I refer to the indiscriminate practice of medicine by the ignorant and unqualified.

In several of the most enlightened States the laws require of all who would practice the healing art the possession of proper qualifications and credentials. In the legislatures of the great States on either side of us, New York and Massachusetts, bills are now pending for the regulation of the practice of medicine, and the protection of the people from the depredation of charlatans and quacks. (I apply these terms only to impostors and uneducated persons.) The bill for a public act relating to "Itinerant Practitioners," reported by a committee at our last meeting, contained some excellent features, and might easily, I think, have been so altered in one or two of its provisions as to have met the approval of all candid minds, and if more time had been allowed for its consideration it would probably ere this have become a law, and would have marked a very important advance toward a general law regulating the practice of medicine. Sooner or later the intelligence of Connecticut will demand of the legislature the adequate protection of Society from this great evil, against which so many people are incapable of protecting themselves. But any movement of this kind will fail of success if it does not originate with this body. Whenever the proper time arrives it is to be hoped that we shall not be prevented by a timid conservatism from advocating what we all must acknowledge to be a needed extension of legal protection over the lives and health of the community.

It is my painful duty to announce to you that since our last annual meeting we have been called upon to lament the decease of two of our most honored and widely-known associates. The death of H. M. Knight, M.D., of Lakeville, for many years at the head of the school for the education of idiots and imbecile children, of which he was the originator, will be felt as a public calamity.

In the death of Benjamin H. Catlin, M.D., of Meriden, a former President of this Society, and one of the Vice-Presidents of the American Medical Association, we miss from among us one

who for many years has been one of our most active and prominent members, and conspicuous among the foremost in promoting the highest usefulness of the society, and wisely directing its influence in establishing by proper legislation several of the most important humanitarian institutions and laws of the State.

A. B. Haile, M.D., of Norwich, another of the prominent and honored physicians of the State, and who, within a few years, frequently represented New London County at our meetings, has also recently deceased. In the communities where these eminent physicians were loved and honored for their social qualities, and the high professional and moral worth for which they were all justly distinguished, their loss will be greatly felt.

As for ourselves, let us emulate their personal virtues, and equal if we can their unselfish devotion to the highest interests of the profession, and of humanity. The good deeds of such men will live forever. Their memories will never die.

The following addition to the by-laws from the Convention of 1879 was passed, to be added to Section 9, Chapter IV, in the fifth line after "Connecticut Medical Society," as follows:

"A certified copy of the levy of tax, signed by the President and Secretary, shall be sent annually to the Clerk of each County Association."

The President then appointed the following committees, which were read by the Secretary.

On Unfinished Business.

H. S. Fuller, M.D., C. M. Carleton, M.D.

On County Resolves.

W. H. Bunnell, M.D., John Cotton, M.D.

On Business.

C. W. Chamberlain, M.D., *ex officio.* Wm. A. Lewis, M.D.

On Honorary Members and Degrees.

G. W. Russell, M.D., L. J. Sanford, M.D.

Auditing Committee.

R. W. Mathewson, M.D., N. Nickerson, M.D.

To Nominate Essayists.

M. C. White, M.D., H. S. Fuller, M.D.
 N. Nickerson, M.D.

The committee on unfinished business were ready to report at once that there was no business except that in the hands of special committees left over from the last convention.

On motion of Dr. Chamberlain the report of the committee was accepted, and the committee discharged.

Dr. G. W. Russell, after commenting upon the great importance of the subject, and the careful consideration and study it deserved from the medical profession, offered the following:

Resolved, That so much of the President's address as refers to medical expert testimony in cases at law be referred to a committee of three, who shall report at the next meeting of this society a full consideration of the subject in all its bearings.

The resolution was passed unanimously, and, it having been voted that this committee be appointed by the chair, the following gentlemen were appointed and unanimously confirmed:

G. W. Russell, M.D., Hartford,
 S. G. Hubbard, M.D., New Haven,
 Wm. Deming, M.D., Litchfield.

On motion of Prof. L. J. Sanford the following resolution was passed :

Resolved, That that portion of the President's address relating to the sale of poisons be referred to a Special Committee of three, to report to the next Convention.

The president appointed on this committee

Rufus Baker, M.D., Middletown.
 Wm. Deming, M.D., Litchfield.
 S. H. Bronson, M.D., New Haven.

On motion of Prof. C. A. Lindsley, the following resolution was passed:

Resolved, That so much of the President's address as refers to the conferring of additional powers upon the State Board of Health respecting the care and preservation of records and certificates of vital statistics be referred to a Special Committee to report to the next Convention.

The president appointed on this committee the following :

- C. A. Lindsley, M.D., New Haven.
 W. A. M. Wainwright, M.D., Hartford.
 A. M. Shew, M.D., Middletown.

Dr. Lindsley declining the position of Chairman of this Committee, as he was a member of the State Board of Health, the president appointed Dr. M. C. White in his place.

On motion of Dr. Chamberlain a recess was then taken for the various county delegations to report each the name of a member of the committee to nominate officers for the ensuing year. The following names were reported:

- G. W. Russell, M.D., Hartford County.
 L. J. Sanford, M.D., New Haven County.
 J. D. Nelson, M.D., New London County.
 W. H. Bunnell, M.D., Fairfield County.
 Wm. A. Lewis, M.D., Windham County.
 J. J. Newcombe, M.D., Litchfield County.
 Rufus Baker, M.D., Middlesex County.
 G. H. Preston, M.D., Tolland County.

The Convention was then called to order, after the various committees to which business had been submitted had retired to their several rooms.

The treasurer's report was read and referred to the Auditing Committee with its accompanying vouchers. After examination by the committee they reported it as correct, their report was accepted, and the treasurer's report ordered on file. The following is a summary :

May, 1879, Balance in treasury,	\$257.07
Received during fiscal year 1879,	545.52
	<hr/>
	\$802.59
Expenditures during 1879,	519.69
	<hr/>
Balance in treasury,	\$282.90
Excess of receipts above expenditures,	\$25.83
Increase of expenditures over 1878,	73.69
Increase of receipts,	183.23

Indebtedness of the several counties for the tax laid in 1879 :

- Hartford County, Jas. Campbell, Jr., clerk, . None.
 New Haven County, C. W. Gaylord, clerk, . \$12.00

Fairfield County, F. M. Wilson, clerk,	\$12.00
New London County, A. Peck, clerk, .	6.80
Windham County, J. B. Kent, clerk,	3.50
Litchfield County, J. J. Newcombe, clerk,	None.
Middlesex County, J. H. Grannis, clerk, .	"
Tolland County, G. H. Preston, clerk, .	"

This is the best report that has been made during my term of office; a deficiency of less than thirty-five dollars in the whole State, while, as a rule, in one or more counties alone this amount has been generally exceeded. The treasurer commends especially in his report the zeal, activity, and efficiency of Dr. F. M. Wilson, the new clerk of Fairfield county, and of Dr. C. W. Gaylord of New Haven county, who have done so well in such usually difficult fields. As before stated, the prosperity of the society is closely dependent upon the county clerks, and the society is to be congratulated upon the efficient manner in which the various societies are at present officered.

The Committee on County Resolves reported favorably upon the substance of the resolutions which had been transmitted to them from the Committee of Publication; also, by motion of Prof. L. J. Sanford, from the New Haven County Medical Association. their report was accepted, passed as a resolution, and referred to the next Convention as an amendment to the By-Law, so that it should read as follows: "Chapter III, Sec. 6," to be added after the word "expedient."

SEC. 6. It shall be the duty of the Fellows of the several counties to present to the annual Convention short obituary sketches of deceased members, which shall be revised, amended, or condensed by the Committee of Publication as they deem expedient. In case, however, of any considerable changes in any obituary sketch, either in revising, amending, or condensing, said sketch shall be submitted to the writer before publication in the Proceedings.

Dr. G. W. Russell, as Chairman of the Committee on Honorary Degrees and Honorary Members, reported that no names had been presented to them for honorary degrees, nor any new names for honorary membership. He reported favorably on the names of Dr. A. N. Bell and Dr. E. C. Seguin, reported from the last Convention for honorary membership. Dr. A. N. Bell was well known as the editor of the *Sanitarian*, and a pioneer in the province of State Medicine and Public Hygiene. His recent reports upon the sanitary condition of Memphis and the Southern seaport

cities were familiar to all. He was identified with this State in many ways; commenced the practice of medicine in Waterbury and received his preliminary medical instruction here. His preceptor was Dr. Geo. C. Blackman, afterwards professor of surgery at the Ohio Medical College; he received the honorary degree of A.M. from Trinity College in 1855.

Dr. Seguin is well known as a specialist in diseases of the nervous system, and as editor of the *Archives of Medicine*, and to the profession of this State as pathologist at the Hospital for the Insane at Middletown.

Drs. Bell and Seguin were accordingly elected honorary members of the Society.

On motion of Dr. Chamberlain the usual tax of two dollars was levied upon each member of the Connecticut Medical Society payable June 1, 1880.

The secretary stated that, in consequence of the increased membership, six hundred copies of the Proceedings were not sufficient to meet all demands and leave a sufficient surplus on hand. Five hundred and fifty copies were sent out at once, and there were other calls for copies before the end of the year; there were less than twenty copies of the Proceedings of 1879 on hand. Seven hundred copies would leave enough in stock after supplying all demands.

Dr. Lindsley stated that he had reason to believe that seven hundred and fifty copies could be obtained as cheaply as seven hundred, except the cost of the paper required for the extra copies; he therefore moved that the Secretary be instructed to have seven hundred and fifty copies printed if they could be obtained at the same price as seven hundred, plus the extra paper used. Dr. White remarked that if the Secretary was correct in stating that seven hundred copies was enough to supply all demands and leave a proper surplus, no more need be printed, and, judging from his experience, the fifty additional copies would involve more expense than the cost of the paper. The motion of Dr. Lindsley was then put by the President, and was rejected. Dr. White moved that seven hundred copies of the proceedings of 1880 be printed, which was accordingly voted.

The Committee of Business reported approving of the order as printed in the programmes sent out; no new business had been submitted to them.

The Committee on the metric system, appointed on recommenda-

tion of Dr. C. M. Carleton at the last Convention, reported as follows:

To the President and Fellows of the Connecticut Medical Society:

The Committee to whom was referred so much of the President's address as related to the *Metric System* present the following:

REPORT.

Your committee do not propose to enter into an exhaustive discussion of the comparative merits of this and other systems or the advantages and disadvantages of an early change, but rather to indicate to you in a brief summary, the impressions our inquiries and correspondence have left upon us, and for further knowledge refer you to the published "Proceedings of the American Metrological Society" and the circulars of the "Metric Bureau" (Boston).

This System commends itself to us on account of its simplicity, its accuracy, its uniformity, its safety, and its ultimate universality.

It is the decimal system applied to all measures, doing away with all complicated tables and scales, and simplifying the whole, just as our money is simpler than pounds, shillings, and pence. This is already adopted by about thirty nations, and in eleven countries it is in exclusive use.

It is already legalized by Congress, and is being rapidly introduced into this country. In several of the governmental departments it is officially adopted. *The American Medical Association* * adopted it last year, and several State and local societies have made its use obligatory in all reports and documents. Many others recommend its use, and its general adoption in the near future seems inevitable. In view of the above, and many other reasons for the introduction and use of the *Metric System* your committee recommend the adoption of the following

RESOLUTIONS.

First. That the *Connecticut Medical Society* adopt the *International Metric System*, and will use it in its Proceedings.

Second. Requests that those who present papers at its future meetings employ this system in their communications and reprints thereof.

Third. Requests the *Medical Boards of State Hospitals and Asylums* to adopt the *Metric System* in prescribing and reporting cases, and that the faculty of *Yale Medical College* adopt it in their didactic, clinical, and dispensing departments.

Fourth. Requests the *physicians* to familiarize themselves with the system, and help the druggists in its application.

All of which is respectfully submitted.

EDWIN B. LYON, M.D.

E. C. KINNEY, M.D.

C. J. FOX, M.D.

New Haven, Conn., May 26, 1880.

* The Pharmaceutical Convention, which met at Washington, May, 1880, adopted it in the revised Pharmacopœia.

The report elicited considerable debate, both sides of the question being very fairly presented; the resolutions were taken up in order and rejected, except the last, which was accepted. In the judgment of the Convention, the profession were not well enough acquainted with the metric system, practically, to justify its formal adoption by the Society, were such action desirable on other grounds.

The committee appointed also on recommendation of President Carleton last year on the medical examiner system of Massachusetts, in place of the ancient system of coroners, reported as follows:

The Committee appointed last year to investigate the Medical Examiner System of the State of Massachusetts, respectfully report, that, in accordance with the appointment, they visited Boston and were present at the annual meeting of the Massachusetts Medico-Legal Society. They were very cordially received, and every facility was given them for examining the System so successfully inaugurated by that Society. They freely investigated the System, and were thoroughly convinced that it was a most excellent one, and very much to be preferred to our present Coroner System. After giving the subject careful consideration as adopted to the wants of the State of Connecticut, and after consultation with several prominent lawyers of the State, the Committee came to the conclusion that it was not at present advisable to attempt the introduction of the system into this State, as so little is known concerning it by the profession in the State, as well as the public at large. In their judgment it would have been ill-advised to have brought any bill pertaining to the subject before the last State Legislature.

W. A. M. WAINWRIGHT, M.D.,

C. W. CHAMBERLAIN, M.D.,

A. E. WORDIN, M.D.,

Committee.

The report of the committee was accepted and the committee discharged.

The committee on Commissioners of Lunacy, in accordance with a series of resolutions introduced at the last Convention by Dr. N. Nickerson of Meriden, reported as follows :

WHEREAS, We consider that our information upon the questions involved in the resolutions referred to us is not sufficiently extensive to enable us to recommend decided action at present, we submit the following resolution :

Resolved, That a Committee of three, conversant with the history of insanity, should be appointed by the State Convention, to investigate

the subject of Lunacy Commissions in the other states, as well as in foreign countries, their history, aims, and results, for the information of the next annual Convention.

MOSES C. WHITE, M.D.,
N. NICKERSON, M.D.,
GURDON W. RUSSELL, M.D.,
C. W. CHAMBERLAIN, M.D.,
C. A. LINDSLEY, M.D.

The report of the committee was accepted and the committee discharged.

The President appointed as members of this committee,
Dr. A. M. Shew, Middletown,
Dr. H. P. Stearns, Hartford,
Dr. D. A. Cleaveland, Middletown.

The Committee on Examination made their annual report through Dr. D. A. Cleaveland; in his absence it was read by the Secretary, and referred to the Committee on Publication. (See Appendix B.)

The Committee to nominate professors in the Medical Department of Yale College also reported their action to the Convention through their Secretary, Dr. Wm. Deming. The report was accepted and ordered on file. (See Appendix A.)

The nominating Committee reported the following officers for 1880-1881, who were accordingly elected.

President—G. L. PLATT, M.D., Waterbury.
Vice-President—WM. DEMING, M.D., Litchfield.
Treasurer—F. D. EDGERTON, M.D., Middletown.
Secretary—C. W. CHAMBERLAIN, M.D., Hartford.

Committee on Matters of Professional Interest.

W. A. M. Wainwright, M.D., Hartford; L. S. Wilcox, M.D., Hartford; W. L. Bradley, M.D., New Haven.

Committee on Examination.

G. H. Preston, M.D., Tolland; D. A. Cleaveland, M.D., Middletown
H. S. Fuller, M.D., Hartford; C. E. Hammond, M.D., Portland,
Elijah Baldwin, M.D., South Canterbury.

Committee to Nominate Professors in the Medical Department of Yale College.

G. W. Russell, M.D., Hartford; C. H. Pinney, M.D., Derby; R. S. Goodwin, M.D., Thomaston.

Committee to Nominate Physician to Retreat for Insane.

Ashbel Woodward, M.D., Franklin; G. L. Platt, M.D., Waterbury.

On Committee of Publication.

G. W. Russell, M.D., Hartford.

Committee of Arrangements.

P. M. Hastings, M.D., Anniversary Chairman; H. S. Fuller, M.D.;
George P. Davis, M.D.

Dissertator—I. W. Lyon, M.D., Hartford.

Alternate—N. Nickerson, M.D., Meriden.

Delegates to American Medical Association, 1881.

I. G. Porter, M.D., S. W. Turner, M.D., Geo. F. Lewis, M.D., E. C. Kinney, M.D., Geo. L. Porter, M.D., Geo. B. Hawley, M.D., L. J. Sanford, M.D., Geo. C. Jarvis, M.D., L. H. Wood, M.D.

Delegates to Maine Medical Society.

C. M. Carleton, M.D., Rufus Baker, M.D.

Delegates to New Hampshire Medical Society.

H. P. Stearns, M.D., J. C. Jackson, M.D.

Delegates to Vermont Medical Society.

A. S. Warner, M.D., J. A. Warren, M.D.

Delegates to Massachusetts Medical Society.

N. Nickerson, M.D., F. M. Wilson, M.D.

Delegates to Rhode Island Medical Society.

F. A. Coates, M.D., Geo. H. Lewis, M.D.

Delegates to New York Medical Society, 1881.

S. G. Riskey, M.D., J. D. Nelson, M.D.

Delegates to New Jersey Medical Society, 1881.

Geo. L. Lewis, M.D., Lowell Holbrook, M.D.

Delegates to Pennsylvania Medical Society.

G. W. Russell, M.D., J. D. McGaughey, M.D.

The Convention then adjourned to meet the 4th Wednesday in May, 1881, at Hartford.

C. W. CHAMBERLAIN, M.D., *Secretary.*

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held at the Common Council Chamber, City Hall, New Haven, Thursday, May 27th. The meeting was called to order at 9.30 A. M., by the President, Dr. A. R. Goodrich. The first business in order was the report of the Secretary, as follows:

The past year has been marked by the same increase of membership that has been characteristic of the past few years. The Society loses ten by death, five by dismissals and removals. The new members number thirty-five, leaving a net gain of twenty. The society now numbers four hundred and forty.

The death of one of the former presidents of the society, Dr. Catlin, was alluded to by the President yesterday. In the death of Dr. H. M. Knight of Lakeville, Superintendent of the School for Imbecile Children, at Lakeville, the Society has suffered an irreparable loss. With self-sacrificing devotion, he gave the best energies of his life to labor in a neglected and often despised field, lived to see his ideas and methods accepted, and to win recognition as an authority in his chosen field, when he yielded to the effects of over-work and mental strain, and death ensued from a disease of the nervous system, which indeed had rendered his last years years of pain. His ever-ready sympathy and aid in every good work and endeavor endeared him to a host of friends among his professional associates, to whom his death is felt as a personal bereavement.

The following are the names of the new members received through the various county associations. They are distributed among the various counties as follows: Hartford County, 9, New Haven, 12, Fairfield, 8, Windham, 1, Litchfield, 1, Middlesex, 2, Tolland, 2. The deaths are, in Hartford County, 1, New Haven, 2, New London, 2, Fairfield, 3, Windham, 1, Litchfield, 1.

NEW MEMBERS.

- M. D. Mann, M.D., College of Physicians and Surgeons, N. Y. 1871, Hartford.
 J. A. Stevens, M.D., University N. Y., 1872, Hartford.
 J. F. Axtelle, M.D., Long Island Medical College, 1877, Hartford.
 M. M. Johnson, M.D., University N. Y., 1877, Hartford.
 William D. Morgan, M.D., College of Physicians and Surgeons, N. Y., 1877, Hartford.

- G. B. Packard, M.D., Burlington, Vt., 1874, Hartford.
 W. R. Tinker, M.D., Univ. N. Y. 1880, East Hartford.
 J. E. Griswold, M.D., Univ. N. Y., 1878, Glastonbury.
 W. W. Horton, M.D., Univ. N. Y., 1878, Unionville.
 Wm. O. Ayres, M.D., Yale, 1854, New Haven.
 Allen W. Leighton, M.D., Yale, 1879, New Haven.
 Wm. B. Graves, M.D., Univ. N. Y., 1880, New Haven.
 James Kingsley Thacher, M.D., Yale, 1879, New Haven.
 James C. Barker, M.D., Yale, 1879, New Haven.
 L. C. Vinal, M.D., Yale, 1880, New Haven.
 Geo. D. Ferguson, M.D., Univ. N. Y., 1879, West Meriden.
 Walter H. Holmes, M.D., Harvard, 1879, Waterbury.
 Walter L. Barber, M.D., Bellevue, 1873, Waterbury.
 Scott R. Baker, M.D., Yale, 1879, Ansonia.
 J. G. O'Sullivan, M.D., Univ. N. Y., 1874, Birmingham.
 A. E. May, M.D., University of Vt., 1879, Naugatuck.
 E. C. Clarke, M.D., University of Vermont, 1860, Norwalk.
 W. J. Wakeman, M.D., Yale, 1879, Norwalk.
 A. B. Gorham, M.D., Yale, 1879, Norwalk.
 S. M. Garlick, M.D., Harvard, 1877, Fairfield.
 B. W. Munson, M.D., Yale, 1869, Bridgeport.
 L. H. Huntington, M.D., Yale, 1876, Willington.
 M. J. Rising, M.D., Univ. Michigan, 1876, Bridgeport.
 W. C. Bowen, M.D., College of Physicians and Surgeons, N. Y.,
 1877, Bridgeport.
 C. Gardner, M.D., Jefferson Medical College, Pa., 1880, Hampton.
 Frederick E. Barrows, M.D., Univ. N. Y., 1876, West Winsted.
 James Conlan, M.D., Univ. of Vt., 1878, Cromwell.
 S. P. Ladd, M.D., Univ. N. Y., 1879, Portland.
 Eli P. Flint, M.D., Yale, 1879, Mansfield Center.
 Frederick E. Johnson, M.D., Univ. Med. Coll., N.Y., 1879, Mans-
 field Depot.

These are graduates as follows: Of the Medical Department of Yale College, 11; University Medical College, New York, 13; College of Physicians and Surgeons, New York City, 3; University of Vermont, 4; Harvard, 2; Long Island Medical College, University of Michigan, and Jefferson Medical College, Pa., 1 each.

The annual address of the President was not given this year, on account of recent severe illness.

Dr. Wainwright presented the report of the Committee on Mat-

ters of Professional Interest, which was referred to the Committee of Publication.

Dr. J. Leland Miller of Sheffield, Mass, a delegate from the Massachusetts Medical Society, was introduced to the Convention by the President, and, in a brief speech, presented the greetings and kind wishes of the Massachusetts Medical Society.

Dr. Frank H. Hamilton of New York, an honorary member of this society, was introduced by Dr. S. B. St. John of Hartford, and responded by expressing his gratification at being able to meet for the first time with a society of which he had long been an honorary member.

The following telegram was read from Dr. J. Marion Sims.

NEW YORK, May 27, 1880.

President of State Medical Society :

Had set my heart on being with you to-day, but circumstances prevent. Hope for better luck next year. Wish your meeting every success, scientific and social.

J. MARION SIMS.

Dr. Wainwright reported the pleasant reception he met with as a delegate to the Massachusetts Medical Society, and Dr. Chamberlain gave a brief account of the meeting of the American Medical Association at Atlanta, Ga.

The dissertation was then presented by Prof. W. H. Carmalt of New Haven on "Some Limitations in the use of the Ophthalmoscope."

Dr. St. John moved that the thanks of the Convention be extended to Dr. Carmalt for his very valuable and timely paper, which he very warmly commended. The motion was seconded by Dr. Bacon, who heartily endorsed the paper, and spoke on several of the points presented. The paper was also further discussed by Drs. Wilson and Cleaveland. The motion was passed that the thanks of the Convention be given to Prof. Carmalt, and the paper referred to the Committee of Publication.

Dr. F. W. Brown exhibited a patient, a boy of eleven, who in playing before a bonfire had received a deep and extensive burn from hip to knee, covering the whole posterior surface of the thigh. This had been healed without *cicatricial* contraction, by the process of skin-grafting; over two thousand grafts had been used. The center of the wound still showed how the healing process spread from the little slips of cutaneous tissue.

Professor Carmalt exhibited a perimeter of his invention to take the place of the more expensive instrument of Forster,

designed to show the actual limit of the visual field. This instrument, it was stated by Dr. St. John, had won unusual commendation at the meeting of the American Ophthalmological Society at Newport, where it was also exhibited.

Dr. H. P. Stearns then read an essay on the "Insane Diathesis, or the border land between sanity and insanity."

On motion of Dr. Cleaveland, seconded by Dr. Shew, the thanks of the Convention were extended to Dr. Stearns for his valuable paper, and it was referred to the Committee of Publication. The paper was also discussed by Drs. Cleaveland, Shew, Russell, and others, who warmly indorsed the views presented.

Dr. J. B. Kent read an essay on Functional Disorders of the Nervous System. On motion of Dr. Chamberlain, the thanks of the Convention were extended to Dr. Kent, and a copy of his essay requested for publication.

Dr. Hamilton then, by invitation of the Committee of Arrangements, addressed the Convention on the proper treatment of Colles Fracture, illustrating his remarks by mounted specimens of fractured radii, and demonstrating the proper methods by applying the dressings to an arm. He advocated loose dressings, one splint on the under side so padded that there would be no support beneath the fractured ends, and extending only to the commencement of the palm, leaving the hand free and encouraging free motion of the fingers and hand. Where the patient could be trusted these dressings should be removed at the end of the third week.

Dr. J. P. C. Foster then read an essay on the Hereditary Transmission of Syphilis. The thanks of the Convention were voted Dr. Foster for his very able essay, and it was referred to the Committee of Publication.

Dr. D. A. Cleaveland then read an essay on a Notable deficiency in Medical Education.

On motion of Dr. Stearns, seconded by Dr. Shew, the thanks of the Convention were voted Dr. Cleaveland, and the paper was referred to the Committee of Publication.

The points in the paper were discussed by Drs. Russell, Shew, Stearns, and others, and general assent expressed as to the desirability of a change in the law respecting the commitment of the insane, which now requires the sworn statement of but one reputable practitioner.

The following essays were read by title only, as the dinner hour had been reached, and referred to the Committee of Publication:

Examinations of the Eye as a Help to Diagnosis of Extra-ocular Disease.—N. E. Worden.

Chrysophanic Acid in Skin Diseases.—C. J. Fox.

Voluntary papers and papers from various county societies were also read by title, and referred to the Committee of Publication.

The following Essayists were reported by the Committee and elected for the ensuing year:

H. B. St. John, Hartford,
Henry Fleischner, New Haven,
E. C. Kinney, Norwich,
James P. Gregory, Bridgeport,
J. R. Sanford, West Cornwall,
Wm. Woodruff, Thomaston,
J. H. Grannis, Saybrook,
John Cotton, Woodstock.

The Convention then adjourned for the annual dinner at Red cliff's.

C. W. CHAMBERLAIN, M.D.,
Secretary.

R E P O R T

OF THE COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

Your Committee have the honor to present the following reports from the different counties of the State. It is a matter of congratulation (as gathered from these reports) that the health of the State has during the past year been so good; no serious epidemics have prevailed; the amount of sickness has been slight; and very few cases of interest have occurred.

Owing to these facts the labors of your Committee have been comparatively light, and to them must also be due the fact that our report this year presents so meagre an appearance.

Respectfully submitted,

W. A. M. WAINWRIGHT, M.D.

L. S. WILCOX, M.D.

W. L. BRADLEY, M.D.

HARTFORD COUNTY.

Dr. W. A. M. WAINWRIGHT, *Chairman*

of Committee on Matters of Professional Interest in the State :

DEAR SIR,—I have the honor to present the following report, derived from replies to questions pertaining to Obstetrics, received from twenty-three physicians residing in this county.

Summary from replies to Question First—"What has been the percentage of deaths, either of mother or child, in your obstetrical practice?"

1st. One reports no death of mother in a practice of 36 years. One none in a practice of 15 years; another has had no death of mother in 1,015 cases. Five, no deaths at all. Five, no answer. Two, $\frac{1}{4}$ of one per cent. The following are individual experiences: $1\frac{3}{8}\frac{2}{3}$ per cent.; $\frac{1}{2}$ of one per cent.; $\frac{3}{10}$ of one per cent.; $\frac{1}{3}$ of one per cent.; .005 of one per cent.; $\frac{1}{300}$ of one per cent. Two, $\frac{3}{8}$ of one per cent.

2d. Of child: One reports $7\frac{1}{2}$ per cent. Two, 4 per cent. Two, 3 per cent. Three, 1 per cent. One, $1\frac{3}{8}\frac{2}{3}$ per cent. Three, 2 per cent. One, 10 per cent. Three, 1 per cent. One, $\frac{1}{8}$ of one per cent. One, $\frac{1}{4}$ of one per cent. Eight, no reply.

To Question Second, "In what proportion of cases of Breech presentation is the child still-born?"

The following replies are each from one physician: One case during eight years of practice; 13 per cent.; $1\frac{1}{2}$ per cent.; $1\frac{1}{2}$ to 5 per cent.; $\frac{1}{2}$ of one per cent.; 2 per cent. Two, $\frac{1}{4}$ of one per cent. Three, 5 per cent. Twelve, no answer.

To Question Third, "Is it your custom to administer ergot in the last stage of labor?"

One, only in tedious labors. Fourteen, no. Three, yes. One, sometimes. One, no answer. Three, not in labor, but immediately after.

To Question Fourth, "What considerations govern you in its administration?"

Two, no answer. Fifteen give it to overcome inertia of the uterine and to guard against hemorrhage. One, when the os is soft and dilatable, and when labor is not far enough advanced to admit of forceps. Two, in last stages of protracted labor, where mother becomes exhausted, when the pains become feeble and there is nothing to prevent a speedy delivery. Two, to prevent hemorrhage and septicæmia. One, to secure complete involution, to expel clots, and to lessen after-pains.

To Question Fifth, "Have you noted any unpleasant effects from the use of ergot, either upon the mother or child?"

It often produces diarrhœa in the mother, increases after-pains, and causes the early death of the child. Sometimes it induces vomiting. I usually find after-birth retained after its administration. It does not always accomplish delivery,—replies from one each. Two, no answer. Eight, no harm to mother or child. Nine, no harm to mother, but harmful to child.

To Question Sixth, "In what proportion of cases do you deliver with the forceps?"

One, 2 per cent. Two, 1 per cent. One, from 1 to 15 per cent. Three, 10 per cent. One, 10 to 15 per cent. One, 15 per cent. One, $12\frac{1}{2}$ per cent. One, $16\frac{2}{3}$ per cent. One, 20 per cent. Two, $3\frac{1}{2}$ per cent. One, Have used the forceps three times in eight or nine hundred cases. One, 1 in one hundred and forty cases. Seven do not answer the question.

To Question Seventh, "Is the frequent resort to the use of forceps in protracted labor to be encouraged or deprecated?"

Thirteen, to be encouraged. Seven, deprecated. Three, no answer.

To Question Eighth, "Do you consider it good practice to resort frequently to the use of anæsthetics in labor?"

Thirteen answer in the negative. Ten in the affirmative.

To Question Ninth, "Which anæsthetic do you prefer?"

Twelve prefer chloroform. Six give ether the preference. One administers ether or bromide of ethyl. One uses the following mixture: alcohol one part, chloroform two parts, and ether three parts. Twelve give no reply.

To Question Tenth, "Do anæsthetics increase the danger of post partum hemorrhage?"

Twelve reply in the negative. One finds that practically they do not, though theoretically one would expect them to. Six reply in the affirmative, and five do not answer the question.

It appears from these summaries that there is a great difference of opinion and practice upon several of the points considered, notably, upon the use of anæsthetics, ergot, and the forceps.

JAS. CAMPBELL, M.D., JR.,

Reporter.

A CASE OF CHRONIC LEAD POISONING.

BY C. W. CHAMBERLAIN, M.D., HARTFORD.

During the last year an unusual number of cases of chronic lead poisoning have been brought to my attention, both in my own practice and in consultation. The majority have been traced to lead dissolved in water used for drinking, generally from lead pipes, and in this connection I would state that spring water usually dissolves lead more readily than well or ponded water. In fact the purer the water the more lead is dissolved. Distilled water will dissolve a greater quantity than ordinary water.

This is a fact not generally known, but of considerable importance, because it is urged that in cities and towns, and for pumps and cisterns, lead pipes are used with impunity, therefore, when water is brought from a pure spring a greater or less distance, the lead can as safely be used, while the reverse is the case. The reason for this is as follows:

The oxygen of the water acts upon the lead; the purest waters are the most highly oxygenated, as they contain oxygen in solution as well as in combination, organic impurities, such as arise from the decomposition of vegetable matters, leaves and the like, as well as from animal decomposition, favor the solution of lead pipes. Spring water thus is likely to contain nitrates and nitrites, and also to be highly oxygenated, hence is more likely to dissolve lead than other waters. The impurer waters contain sulphates, or sulphuric acid for instance, or phosphoric acid and phosphates, or more often carbonate of lime. These all form insoluble compounds with the lead, and crusting the interior of the pipe protect it from any further action of the water.

Other cases were traced to lead from cooking utensils of enameled ware, granite or marbleized, where the work was badly done, leaving free lead to be dissolved by the first vegetable acid with which it came in contact; Several to the occupation of painter or manufacturer of paints, and several untraced. One or two are still under observation as to the cause.

The following case is unique in some of its symptoms, while the cause was soon apparent on learning the method of work each day. I saw the case after it had been in another physician's hands for several months. At the time I saw it the sickness was not attributed to lead poisoning.

The following is an account of the case as derived from the patient, his friends and physician, and what I learned from examinations I made:

Suddenly, while eating, or at night while in bed, he would be seized with a sinking sensation, as if he were dying, became unable to speak distinctly—uttering thick, undistinguishable sounds, as stated by his wife, the tongue rolling about in the mouth with loss of control, inability to protrude. The right arm dropped powerless, and the right leg could be moved with extreme difficulty, the whole right side felt numb. The arm, if lifted, dropped, and hung straight at the side. The breathing was labored and slowed, as stated by observers, fourteen to fifteen respirations per minute. The physician stated that the rate of the pulse was not affected, but it was oppressed.

The urgency of the symptoms were relieved by brandy and diffusible stimulants—that is the oppression and faintness. These attacks had been preceded by slighter ones, similar in character, at first, under advice, controlled by stimulants and cathartics. Quinine and like remedies had been used for the supposed intermittent nature of the disease.

The absolute loss of muscular tonicity of the whole arm, which acted as the hand does in wrist drop, was characteristic. The leg and side were not involved until the attacks had become quite frequent, and their effects more lasting. Just previous to this, however, he had in the press of business been working over hours.

On close questioning, he stated that he had severe attacks of colic occasionally for a year or two, and obstinate constipation at times for several years. He had for seven years been tempering springs in a bath of melted lead. These springs were taken from a bath of oil and placed in melted lead. Whenever the scum from the oil accumulated to any extent this was set fire to on the top of the lead, and the "burning off," as it was called, was closely watched by the operator. Of late he admitted a sweetish taste to have been noticeable when this process was attended to.

On examination of the urine, traces of lead were found. This became more abundant after the treatment was carried on for a while. The patient was put upon iodide of potassium in increasing doses, until symptoms of iodism appeared; dryness of the throat and symptoms of a cold in the head, when the dose was kept up at five grains less than when these symptoms appeared, when they ceased to increase, otherwise the dose would have been further decreased. Commencing with ten grains three times a day, largely diluted with water, the dose was increased at first every second day five grains, until half a drachm was reached at a dose, then every third day, until a drachm three times a day was reached. This was the limit of toleration, then the dose was diminished five grains. This was kept up for a week, when the reverse was commenced, as no attack occurred during the week. When fifteen grains three times a day

was again reached, the medicine was continued several weeks at that rate. There was no recurrence of the attacks after the iodide treatment, but several times slight uneasy sensations. The patient improved in flesh, had lost flesh decidedly before, and in color, was at commencement of treatment extremely pale. There was no very distinct lead-line upon the gums. The arm regained fully its muscular power, although somewhat slowly. In these attacks, at their worst, the symptoms, except those relating to the arm, passed off within a few hours. The left side occasionally felt numb also, and in one attack the whole upper part of the body was numb, and felt, as he said, heavy; there was also some loss of sensation, this was more marked in the right arm than anywhere else, although there appeared to him loss of sensation unless the part was touched in any way. The attack involving the whole upper half of the body was the severest one he had. Tonics, quinine, and iron were given throughout the treatment, and continued after the discontinuance of the iodide. The sudden, absolute loss of muscular tonicity of the right arm distinguished these attacks from ordinary hemiplegia, also the quick recovery from symptoms that would have been accompanied with long-continued prostration and loss of muscular power. The sudden return of power to the arm at first was peculiar; later on the arm, while regaining power of motion, lost strength, which was very slowly regained. The patient presented a marked cachectic appearance. The presence of lead in the urine was also diagnostic. The bowels became regular under the iodide treatment, although before very constipated, requiring the constant use of cathartics. It should be stated that the numbness or loss of sensation was subjective entirely; the sensibility when the part was touched or pinched was unchanged. The loss of power in the muscles of the right arm was progressive, and was most marked in those of the hand and forearm, while the muscles of the right shoulder and chest had become decidedly weakened.

NOTES AND OBSERVATIONS UPON FOUR CASES OF PUERPERAL PERITONITIS.

BY R. M. GRISWOLD, M. D., NORTH MANCHESTER, CT.

THE following cases of Puerperal Peritonitis, occurring in my practice during the months of Nov., Dec., and Jan., 1878-79, are interesting as illustrating the length of time during which the contagious influences of Puerperal fever may be exerted.

That the second case was due to the direct contagious influence of the first there can be but little doubt, while the third and fourth cases were undoubtedly the production of the contagion, conveyed through the medium of my own person, although, as will be ob-

served, the time intervening between the second and third, and third and fourth, was very considerable.

As regards Case II., there is a possibility that peritonitis may have followed as a result of the labor, without a contagious influence having been exerted from the first case, and were it not for the third and fourth cases, which followed, the peritonitis in this instance might have been attributed to the hard labor, but under existing circumstances such a supposition is hardly warrantable.

CASE I. Was called in consultation Nov. 28, 1878, to see Mrs. — act. 30. She had been delivered of child twenty days previous, but had not made a very good recovery. During the great storm of Nov. 23d she left her bed to watch the spire of a church near by, which was momentarily expected to fall. When the spire was blown down, a few minutes later, she went to the door, and wet her feet. Twenty-four hours later she complained of pain, locating it in the bowels, and, as she had had no movement for several days, cathartic pills were administered without the advice of a physician. The pain continuing, and increasing in severity, the family physician was summoned, and diagnosed peritonitis. She was in the latter stages of the disease when I saw her, three days after commencement, and died a few hours later.

CASE II. Dec. 14th, fifteen days after death of Case I., was called to attend in confinement Mrs. —, act. 24, primipara. This lady was a sister-in-law of the previous case, and before her death had been in close attendance upon her. When I saw her she had been in labor six hours, under care of a mid-wife. Found the head presenting in the third position, where, from the attendant's account, it had been for the past two hours. The pains were very strong, and almost without interruption. I expected to be obliged to deliver with forceps, but at length succeeded in rotating the head, and she was soon delivered of a large male child, (11½ lbs.) There was slight rupture of the perineum.

An hour before delivery she began to have considerable fever, which somewhat subsided after birth of child.

Five hours later, 12 M., was called to see her.

Found temperature 102.5, pulse 140. Abdomen distended to size as large as before delivery, and very tympanitic. Intense thirst and great pain and tenderness over nearly the whole of the abdominal region. Countenance pale and anxious. Respiration 35. Some nausea. Ordered warm fomentations of hops and turpentine to abdomen, and Opium gr. i., with Tr. Aeonite Rad., gtt. iii. every hour.

7 P. M. Temperature 101.2. Pulse 148. Pain and tympanitis increased. Lochial discharge very offensive. Tongue heavily coated. Continued Opium, Aeonite, and fomentations, with beef tea and milk.

Dec. 15th, 8.10 A. M. Temperature 101. Pulse 148. Patient somewhat under influence of opium. Tympanitis but slightly diminished.

Copious and continued discharge from the bowels, which was very offensive. Gave enema of warm water, Tr. Opii ζ i, Chloride Sodium ζ i, which was retained about ten minutes. Ordered Opium continued, with directions to watch results, and not diminish dose unless the respirations fell to less than twelve per minute, and ordered Tr. Gelsemium gtt. iii with Aconite.

7 P. M. Temperature 102.5. Pulse 115. Considerable vomiting during the day. Diminished Opium to gr. $\frac{1}{4}$ every hour. Continued Gelsemium and Aconite, and gave powder every two hours, as follows:

℞ Codiae, gr. $\frac{1}{2}$.
 Cerii Oxalat., grs. ii.
 Bismuth Sub. Nit., grs. iii.

Ordered champagne in conjunction with milk and beef tea.

Dec. 16th, 10.10 A. M. Pulse 110. Temperature 102. Less pain and tenderness. No vomiting. Tympanitis slightly diminished, and less discharge from the bowels. Slept considerable during the night. Slight delirium. Taken nourishment well, especially champagne. Continued treatment.

8.10 P. M. Pulse 110. Temperature 101 $\frac{1}{2}$. Continues about as in the morning.

Dec. 17th, 8.10 A. M. Pulse 112. Temperature 100. General appearance much improved. Tympanitis considerably subsided. Reduced Opium to gr. $\frac{1}{4}$ every 2 hours.

1.10 P. M. Pulse 110. Temperature 100. Tympanitis diminishing.

Dec. 18th, 9 A. M. Pulse 105. Temperature 99. From this time the patient improved and went on to gradual recovery.

CASE III. Dec. 29, 1878, nine days after my last call upon the previous case, which was made Dec. 20th, I was called to attend in confinement a lady, aet. 21, primipara, living nearly three miles from Case II., in an adjoining town. After an easy labor of three hours, she was delivered of a male child. Ten hours after puerperal fever ensued, ran the usual course, with not as severe symptoms as in former case, and made a good recovery.

CASE IV. Twenty-nine days from the date of my last visit to Case III., I was called to attend Mrs. —, aet. 21, sister-in-law of Cases I. and II. She was delivered of a male child, after an easy labor. The uterus did not contract strongly after delivery, and an unusual amount of hemorrhage ensued. Gave Fl. Ext. Ergot ζ i, which soon stopped all active flowing. On the second day after I was called to see her, and to my disgust found she had puerperal fever, with a pulse of 160 and temperature of 104. Placed her upon same treatment as in Case I., with the addition of large doses of Quin. Sulph. She recovered, but after a severe and protracted sickness.

REMARKS.

It will be observed that in Case III there was no possible means of communication between the patient and the two former cases, except through the attending physician. There were no other cases of puerperal fever in that locality. The attending nurse had not come in contact with the former cases, and the patient herself did not even know of their existence, and, moreover, none of the clothing worn by me was worn in attendance upon the first two cases; yet after an easy labor, with the very best of sanitary surroundings, and no known or ascertained predisposing causes, puerperal fever resulted. In relation to Case IV, every possible precaution was used, to preclude the chance of contagion from other members of the family, who had been in attendance upon Case II. I communicated to the family the occurrence of the third case, and isolated her at and previous to her confinement from all those who had been about or in attendance upon her sisters. I informed the husband that if her confinement occurred within three weeks from the date of my attendance upon the last case another physician must be summoned. As the period between my last call upon Case III and my attendance upon Case IV was twenty-nine days, I considered all danger of contagion passed, and did not hesitate to attend, but the result was nearly disastrous.

"It is natural," observes Dr. Farr, "for any man to shrink with horror from the supposition that he has communicated so fatal a disease to any of his patients, and to be disposed to receive any other explanation than that which refers it to contagion. Nevertheless, the interests of truth and humanity demand that the evidence of the contagiousness of puerperal fever should be put permanently forward." (W. Tyler Smith, page 627.)

The question now arises, how long is the contagious influence of puerperal fever exerted?

W. Tyler Smith, page 628, mentions the case of two physicians who, after the occurrence of fourteen cases of puerperal fever in their practice, relinquished all business for one month. Returning at the end of this time, several fatal cases immediately occurred among their patients.

In the cases which I have enumerated there existed a period of twenty-nine days between my last attendance upon the third and my first attendance upon the fourth case.

During this interval I had refused to attend two or three obstet-

rie cases, had attended no cases of erysipelas, typhus or other malignant fevers.

Not an article of clothing worn in attendance upon either of the first three cases was worn in attendance upon the fourth. I had in the meantime been subjected to the thorough cleansing of two or three Turkish baths. These facts make it appear impossible that it could have been retained by my person *externally*. I can account for the contagious influence extending over this long period of time in but one way, viz.: The disease-germ is inhaled by the attendant, and for a long time retained in the system; the blood is more or less affected; and the contagious influence given off with the breath, which, certain favoring circumstances supervening, is capable of conveying the disease to a third person. The germ will exert no active influence except upon certain conditions ensuing. These conditions may arise in the pregnant woman at confinement, and produce puerperal symptoms; or in another person suffering from an external wound, and give rise to septicæmia or erysipelas; or again, the germ of the two latter diseases may give rise, in a pregnant woman at confinement, to puerperal fever. How long the germ remains in operation is an unanswered question, but from my own experience I very much doubt the safety of attending a woman in confinement within a less period of time than four or five weeks after attendance upon a case of puerperal fever, and even then should not feel absolutely certain that I might not communicate the disease to my patient.

NEW HAVEN COUNTY.

To the Chairman of Committee on matters of Professional Interest in the State.

The report from New Haven County this year is not an extended one, as the number of answers to a postal sent out by your reporter, asking for reports of interesting cases and any facts of interest to the profession, is limited to two. But in addition Dr. Bradley of this city contributes two interesting cases, one of a Glio-Sarcomatous tumor of the cerebrum and cerebellum, the other on the use of chloral in a case of Traumatic Tetanus. The fact that so few replies have been received this year would seem to indicate that the plan of sending out a general list of questions is the preferable one.

As to the health of New Haven, it has been exceptionally good during the past year, the number of deaths having been considerably less than in previous years. An epidemic of measles has occurred and has caused a number of deaths, while diphtheria has prevailed to a considerable degree, though not so extensively as in previous years. There have also been a good many cases of whooping cough. As to malarial diseases, they occur in the typical forms as well as the masked or modified forms, but not to the degree of years past. Other diseases do not call for special mention.

From Cheshire, Dr. Chamberlin reports that there has been no special change in ordinary types of disease during the past year; malaria still manifests itself, but mostly in the irregular forms of malarial fever and dumb ague. Whooping cough prevailed a good deal last summer, and with severity. A case of capillary bronchitis is mentioned as following whooping cough, which resulted fatally, the patient being a child two years of age. A case of albuminuric convulsions after scarlatina, the patient being a young lady, is mentioned; the case ended in recovery. Also one of chronic albuminuria with irregular action of the heart, the patient being an elderly gentleman; under treatment the dropsy disappeared, and no albumen could be found in the urine, the heart's action also became normal, and the case had apparently recovered, when he took a long journey by rail to his home, some thirty miles distant; here he remained comfortable till early in March, when he "took cold" and died after two weeks' illness.

Three cases of fever are mentioned as occurring in a house rendered damp by great excess of foliage, one of which died.

From North Haven, Dr. Goodyear reports that the year has been exceptionally healthy; diseases of an epidemic character have not been prevalent; measles, scarlet fever, and diphtheria have been less frequent, and of a milder form than in other seasons. Pneumonia and catarrhal diseases prevailed somewhat during February and March, while malarial diseases require the largest share of medical attendance. Typhoid fever has not been observed, except as a symptom of malarial fever. In a case of pneumothorax with œdema of the extremities, together with hydropericarditis, *tr. digitalis* seemed for a time to be of benefit, but the case ultimately proved fatal. In a family in which there occurred considerable sore-throat, and one death from pneumonia in the case of a child seven months of age, while the mother was seriously sick with the same disease, but recovered; it was found that the cistern was foul, and that a cess-pool was situated within eight feet of the well, and the ground in the cellar near the cess-pool was saturated with the overflow.

That more attention has been paid of late to the sanitary condition of the school-houses of the town is mentioned as a gratifying fact.

W. R. BARTLETT, M.D., *Reporter.*

CASE OF GLIO-SARCOMATOUS TUMORS OF THE CEREBRUM AND CEREBELLUM,

BY WILLIAM L. BRADLEY, M.D., NEW HAVEN.

Mrs. S., forty-five years of age, married and the mother of seven children, was seen July 14, 1877, in consultation with Dr. E. S. Meers, at Naugatuck. Her family history indicated that she had reached a critical period of life, and the fact that her mother was subject to paroxysmal insanity and other nervous disorders disclosed an hereditary tendency to nervous disease. For nearly fourteen years Mrs. S. had been subject to epileptiform attacks, which recurred about once in two months, but could not be connected with her monthly period. Until within two months she had been able to walk about the house and did not exhibit any loss of coördinating power. During the previous two months, she had suffered from vertigo, occipital headache, disordered vision, some intolerance of light, sleeplessness, excitability, constipation, and a prickling sensation in the left side of the body, but no impairment of mind and no paralysis. On the occasion of my visit Mrs. S. was in a darkened room, confined to the bed, where she had been for several weeks;

she was reclining upon the back, a position which afforded the greatest ease. As movement of the head caused occipital pain, she held it with her hands in a somewhat retracted position. The skin was pale and of a normal temperature. The muscles were soft, but the body was not emaciated. The countenance bore an anxious, worried appearance, and on exposure to light the eyebrows became contracted. The surface of the tongue was dry and heavily coated, while its movements were very sluggish. Her speech was slow, but intelligible. The eyes had a dull and heavy appearance. Mrs. S. suffered occasionally from vomiting, which was quite independent of the kind of food and the time of its administration; it was the presence of this symptom which had previously led Dr. Tuttle, of Naugatuck, to treat the case as one of inflammation of the stomach. Except the occipital headache, there was no pain in any part of the body. There was dullness over the course of the colon, but elsewhere the bowels were tympanitic. The pulse and respiration were not affected. For twenty-six years there had been an induration of the left breast, which had recently slightly increased, and had occasionally been the seat of shooting pains; at present it measured about two inches in diameter, and was not attended by enlargement of the axillary glands.

The diagnosis of tumor of the brain was especially to be inferred from the following peculiarly characteristic symptoms:—vomiting, without derangement of the stomach, constant occipital headache, and convulsive seizures.

The following was recommended as a palliative treatment:—hypodermic injections of morphine to relieve pain in the head, produce sleep, and arrest vomiting; the iodide of potassium by the mouth or rectum; an enema to move the bowels. The hypodermic injection of one eighth of a grain of morphia, administered by Dr. Meers, was soon followed by relief to the headache and the vomiting, also producing a considerable amount of sleep. At first the morphia appeared to cause an acceleration of the heart's action, the pulse rising to 128, but, after a few days, this effect subsided. The same treatment, in doses as high as one-third of a grain of morphia, three times daily, was continued for nearly two months, uniformly relieving the occipital pain and producing sleep, but, after the first week, it did not completely arrest the vomiting; sometimes this symptom would be absent for several days, but, during the last month of life, it recurred once every day. There was no paralysis, and occasionally she was able to sit up in bed.

Mrs. S. died on the seventeenth day of September, two months after the above-mentioned treatment was commenced; during the last thirty-six hours of life there were convulsive movements of the right eye and the right side of the mouth; and, finally, clonic spasms of the entire body. During the last hours of life she was in a comatose condition.

The post-mortem examination, made by Dr. Meers sixteen hours after

death, disclosed in the right hemisphere of the cerebellum a tumor measuring from an inch to an inch and three-quarters in diameter; and, in the center of the middle lobe of the left hemisphere of the cerebrum, a second tumor of similar character, but smaller in size, about three-quarters of an inch in diameter. On section, the substance of the tumor appeared dry and pale in color; there was no capsulation or peripheral vascularity, but, being firm in consistency, the tumors were clearly defined by the softened and broken down appearance of the surrounding nervous substance. Except an indurated spot in the left breast, to which reference has already been made, the other organs of the body, as far as examined, were found healthy; this agrees with the statement of Sir Wm. Gull, "that tumors of the brain generally occur without any growth in the other viscera."

Dr. Theodore Deecke, special pathologist to the State Lunatic Asylum, Utica, New York, has furnished the following as the result of his microscopical examination:—"The tumor consisted of round cells of from 0.0005 to 0.0007 inch diameter. It was not very vascular, but showed in the interior dilated capillaries and a commencing fatty degeneration, very probably the result of microscopic apoplexies. The mass, similar in structure to the round cell sarcomata, had apparently originated from the neuroglia, and represented a species of Virchow's Glioma."

The cerebral gliomata are usually of slow growth, and this accounts for the gradual development of the symptoms, probably extending over a period of fourteen years. The convulsive movements which appeared towards the close of life, are attributed by Cruveilhier (*Traité d'Anatomie Pathologique Générale*, 1862,) to the consecutive white softening of the surrounding brain substance. Dr. J. Hughlings Jackson (*Brit. Med. Jour.*, 4th Nov., 1871,) considers that convulsions due to the presence of a tumor in the cerebellum are chiefly tonic, and that those caused by a cerebral tumor are chiefly clonic. In the foregoing case the convulsions were all of a clonic character.

USE OF CHLORAL IN A CASE OF TRAUMATIC TETANUS.

BY WILLIAM L. BRADLEY, M.D., NEW HAVEN.

On the 31st of Jan., Mr. H. D., aged forty-four years, of robust constitution, had his right foot pierced by a rusty nail, which was immediately withdrawn. After the injury, he continued to walk about until the evening of the *fifth* day, when he began to suffer severe pain in the foot and ankle. I was called to attend him on the morning of the *sixth* day, and found his right foot and ankle very much swollen and very painful; under the influence of a warm poultice, a small amount of pus was issuing from the point of injury. On the evening of the same day, he com-

plained of an inability to swallow solid food, stiffness of the jaw, and pain in the back of the neck and chest, but slept quite well during the following night. On the evening of the *seventh* day, I found his condition unimproved, and, although he was able to swallow liquids, his mouth could only be opened to admit the tip end of the spoon. On the morning of the *eighth* day, his temperature was 100° , he was perspiring profusely, and the administration of large and frequent doses of morphia, although somewhat relieving the pain, had not produced sleep or any other beneficial effect. A fresh solution of Squibb's Chloral was then administered in a dose of thirty grains every two hours; after the second dose, the rapidity of the pulse was increased to 156, the pain was very much relieved, and considerable sleep was obtained during the following afternoon and night. On the morning of the *ninth* day, he was able to open his mouth to the full extent, but he now began to suffer great pain from frequent tonic contractions of the muscles of the thorax, arms, and back. To arrest these spasms, one dose of chloral was given between the ordinary doses, making ninety grains in the course of two hours; this produced sleep which lasted one and a half hours, but, owing to the increasing debility of the patient and his unwillingness to take the medicine, it seemed necessary to return to the former frequency of dose. There was an entire absence of pain in the abdomen. The bowels were constipated and the urine had a high specific gravity. Liquid nourishment and stimulants were freely given, but he died from exhaustion on the morning of the *tenth* day.

During the last forty-eight hours of life the patient was frequently visited and carefully watched by myself and also by Dr. W. H. Hotchkiss. During this time, the whole amount of Chloral administered was seven hundred and twenty grains. The Chloral caused permanent relaxation of the muscles of the jaw and produced sleep, but it did not have any *constant* effect upon the pulse, respiration, or temperature; nor, except during sleep, did it exert any decided influence to arrest the tonic contraction of the muscles of the thorax, arms, and back.

NEW LONDON COUNTY.

I shall not attempt to make a report for the county, as I have nothing to report. As no questions were sent, there was nothing to draw opinions from the profession generally. I requested a number of the physicians of the county to send me anything that they had of interest: from them I have received three replies. Two say they can furnish nothing for me; the third sends a history of some uterine cases which have been under his care. I enclose them for you. We have had no epidemic, and I have no cases that I desire to make public. I am very sorry there is no more interest felt.

Yours very truly,

L. S. PADDOCK, M.D.,
Reporter for New London County.

 PRACTICAL EXPERIENCES IN PUERPERAL ECLAMPSIA.*

BY E. FRANK COATES, M.D., MYSTIC BRIDGE.

I propose to give some of the results of my own experience and practice in Puerperal Eclampsia. The first notice of the disease, the men who have written books, papers, or monograms upon it, and made reputations, notorious or ludicrous; the etiology, symptomatology, prognosis, or general fatality, I shall not attempt to discuss, but leave each to look up the literature of the subject for himself.

The first case of the disease that I remember being called to treat that gave me much trouble is as follows:

Mrs. W. C., a young woman, in June, 1856, at her first confinement had a still-born child. She soon afterwards had convulsions, which continued for three days. Their number I do not know, as I did not take notes of the case; but she was unconscious during all of the intervals. I had counsel, and at last Dr. Mason Manning was called, and as some of the old women thought she had eaten something before her confinement—as they usually do—he advised that I give the patient a large dose of calomel—40 to 60 grains—combined with jalap, and follow with castor oil enough to make it slide easy. I regarded him as a father in medicine, so acted upon his judgment, expecting, however, my patient would die. The calomel acted as a sedative, but the convulsions did not cease until the physic operated, after which she did not have another spasm. The patient got well in a reasonable time, and is now living.

*By request of The New London County Medical Society, at the annual meeting, April 8, 1880.

CASE 2. October, 1859, I was called to Mrs. G. W. P., Jr., whom I found in convulsions. She had been having some headache for a day or two, with occasional flashes of light before the eyes. She refused to have me called, and exactly how long she had been in convulsions before I was summoned is not known, for at her own request she had been left undisturbed in her chamber for two or three hours before she was found on the bed unconscious. On examination I found labor well advanced. I gave her a large dose of calomel and oil, and delivered her as soon as was practicable of twins, the last child with the forceps; after the placenta was removed she was unconscious, but free from convulsions, for twenty minutes, when she had another, in which she died. She lived only two and one-half hours after my arrival, and her cathartic had not operated.

CASE 3. Mrs. D. O. A. was gathering vegetables from her garden in July, 1861, when she was taken with twinges of pain in the head. She had felt perfectly well before this, and weighed thirty-five pounds more than at the commencement of her pregnancy. I was not called, however, until evening, and she soon afterward had convulsions. She was bled freely, and given a large dose of calomel and oil. I delivered her assisted by Dr. Manning, with the forceps, some time during the night. Her convulsions ceased with the operation of the oil, but she did not arrive to full consciousness for one week afterward, and has never since remembered having that baby, or what transpired at any time during that week. Her recovery was complete.

CASE 4. Mrs. W. P. was confined September, 1861. There was nothing peculiar about her labor, and I left the patient comfortable, but was soon recalled, to find her in convulsions. She was a delicate looking woman, and a stranger to me until quite recently. I therefore called Dr. Manning in counsel. I do not now recollect what was given her, but Dr. M. advised venesection. I feared she was not strong enough to endure it, and she appeared to have sufficient show, but Dr. M. said, "I always bleed in these cases, and never knew one hurt by it." Not knowing what else to do, I finally consented to bleed her, after which she did not have another convulsion, and made a good recovery.

CASE 5. March, 1862, I was called to Mrs. G. W. F., Jr., in labor with her first child. She soon went into convulsions. I gave her calomel and oil, and remained with her all night. The convulsions ceased as soon as the medicine acted on the bowels. She remained unconscious, however, for five days, when her recovery was complete, but she has never since been able to recollect anything that happened during that time.

CASE 6. May, 1863, I was called to Mrs. W. H. J., in counsel with Dr. Miner of Noank. The patient was anasarcaous, weak, and anæmic, but the blood-vessels were full, those of the head turgid in consequence of convulsions, one after another, that had rendered her perfectly unconscious. I advised that a vein be opened so as to relieve the turgescence

and allow the venous coats to act more favorably on the remaining contents, hoping thereby to get a better circulation, and thus relieve congestion and vascular dilatation. This was objected to on account of the poor, watery blood and anæmic state of the patient, but finally my advice was complied with, and sixteen to twenty ounces of blood was removed, after which the patient never had another convulsion, and made a good recovery. This blood was set aside by my direction, and only about one tablespoonful of clot was deposited; the remainder was clear serum.

CASE 7. February, 1868. I was called to Mrs. J. P. F., in counsel again with Dr. Miner. The patient was in labor, had convulsions, was comatose, and knew nothing of what was passing around her until calomel and oil operated, and the convulsions ceased. I was informed that she had urinated freely, but the catheter drew off more than a quart without relief to the spasms. She was safely delivered of a still-born child and recovered perfectly.

CASE 8. November 16, 1870. I was called to Mrs. C. F., whom I found in the latter part of the seventh month of pregnancy, and in convulsions, but labor had not commenced. She was an asthmatic patient, but full of blood and very fleshy. I gave a large dose of calomel and oil, bled her to the quantity of two pints or more, and when the physic operated the convulsions ceased and she had no further trouble. The 20th of December (next month), I delivered her of a still-born child without an unpleasant symptom.

These are a few and some of the most troublesome or severe cases of puerperal eclampsia that I have been called upon to treat, and I present them not so much for the peculiarity of the cases as for the peculiarity and success of the treatment. Since my consultation with Dr. Manning, in 1856, first case here reported, I have, in all cases that appeared suitable, depended on calomel as a sedative in one very large dose; forty to sixty grains, combined usually with a dose of jalap (but I do not consider this absolutely necessary), and as the patient is unconscious and can swallow anything liquid, I then place a tablespoon in the mouth, well down upon the tongue, and turn upon this, as fast as is prudent, castor oil to the quantity of four ounces. That calomel in large doses is a sure and very active sedative is not so much a debatable point as that it is not a depressant, but this effect has never manifested itself to any harmful degree in any of my cases, and it has shown itself to be a quicker, more active, and surer blood depurating agent than any other that I know of in the *Materia Medica*. These being in the stomach (and it takes but a short time to get them there), I am then at liberty to use other sedatives, depura-

tives, or anæsthetics, as is thought best under the circumstances, and when there is great vascular dilatation, as there usually is in most cases, I revive the "lost art," and when I have determined to use the lancet, I do not mind at all the quantity of blood drawn, but let it run until the vascular tension gives way to a certain feeling of softness that is communicated from the pulse to the finger, then I stop it ; I do not intend to bleed from so large an orifice, or stop the blood so suddenly, as to endanger syncope, and as the patient is unconscious the nerves are not affected by the surgical procedure or the sight of blood. I never had one faint by reason of the operation. I do not now remember of bleeding a patient under these circumstances that I had reason to regret, and from the one large dose of calomel given in these cases I have never salivated a patient.

Strange as it may appear, and it is remarkably so to me, I have never seen a patient die that had taken the large dose of calomel and oil as soon as was possible after having the first convulsion, neither have I known one to die after having taken the large dose of calomel and oil when they have lived long enough to have them operate, and they have produced the cathartic action of themselves without other assistants. I have had a good many patients with puerperal eclampsia but have never lost but one patient—second here reported—that was my own from the very first. I have been called as counsellor, and to attend those of irregular physicians that have been discharged, but these patients have usually been sick for some time when first seen by me, and more than half of such have died. I have had an experience of more than thirty-five years. Whether this success has all been luck, or whether it has been owing to a bold, heroic, and determined treatment from the very onset, I leave for others to determine.

I have no confidence in a common dose of calomel in puerperal convulsions; it must be given in the fullest sedative dose possible. The same is true in regard to bleeding. A certain impression must be made on the turgescence and circulation, else the lancet is of no avail. The doses of both the calomel and oil may be considered unnecessarily large, but it is probably known to most physicians that half a pint of castor oil will not ordinarily physic more than two or three ounces, the surplus going through as taken, unchanged oil. The same is true of calomel. If one hundred grains be taken only a certain portion will be digested, the surplus will pass along without effect, if there is oil enough to float it.

Whatever the cause of the disease may be, it is generally conceded that the cerebro-spinal and sympathetic nerves are affected somehow from the womb as an organic center, or through debasement of the blood. The vaso-motor nerves are affected, and are the fundamental cause of the vascular dilatation, and if the case is not treated heroically at the very first there is great danger that structural changes will be such that a cure is impossible.

TREATMENT OF PNEUMONIA.

J. D. NELSON, M.D., NORTH STONINGTON.

It is my intention in this paper to consider the different methods of treatment of pneumonia, and to compare them; the views thereon are various and each has its advocates. Would one write a history of its treatment, he would find material enough to fill a large book, in that at one time this treatment prevailed, and at another that. So now we have a whole collection of remedies, which have been recommended by different authorities as chief against pneumonia, and its accompaniments.

In former times the physician attempted to cut short, to abort the disease, but at the present date, we have gradually come to the conclusion that pneumonia is not to be aborted when once fairly started. It has its own peculiar course to run, and the most that one can hope to do against it, is to mitigate the severity. According to the views of most authorities, the chief danger does not lie in the pneumonic process itself, but in the continuous high temperature, in the lessening of the respiratory surface in the lung; the obstruction to the pulmonary circulation, in pulmonary œdema, and finally in exhaustion of the heart.

True these several conditions depend upon the inflammatory process in the lung proper, but this disease of the lungs, pneumonia, tends naturally to recovery, and the means which we employ are directed not against the pneumonic process itself, but rather against conditions dependent thereon. The *chief* indication in pneumonia is sustaining the strength of the patient; and it is our duty to so treat our patient, to give him such remedies, that he shall not lose his strength.

I consider that ordinarily the chief danger in pneumonia lies in the high temperature, and weakening of the heart.

If the pneumonic process extends rapidly over two or three lobes, death may speedily ensue from dyspnea; but in most cases this process does not go on so rapidly, and the constant indications are still against high temperature, and weakness of the heart, for in continuously high temperature we find in almost all acute fevers the greatest danger to life; the elevation in temperature works in itself alone a deleterious influence on all the organs of the body. After continuous high fever we find in the cadaver a change in the parenchyma of the different organs, a sort of parenchymatous degeneration, more or less progressed. So we find after every fever the body more or less emaciated, according to the intensity of the fever. The high temperature has a destructive influence on the tissue itself; and the change which is there produced must naturally produce functional disturbances in the various organs. Especially in pneumonia we have two influences which affect the heart unfavorably.

1. Through the obstruction to circulation in the lungs there is congestion of the pulmonary artery and the right side of the heart, and to overcome this, the heart itself. Here is one condition for weakening the heart.

2. The elevation of temperature produces functional disturbance of the heart's action, which is first shown in an increase in frequency along with weakness of the pulse. Here is the second condition for weakening the heart; and these both lead finally to its exhaustion.

Some patients with excessive and long enduring high temperature have no delirium, while others with slight elevation have. Especially is this the case in drinkers. The coachmen in Berlin, who were so often brought into the clinic with wounds, almost invariably along with the usual surgical fever, displayed the characteristic form of delirium tremens. Between the injury on the body and the cerebral disturbance there was no proportion. These people look strong and hearty, but they all drink brandy.

When, as it seems to me, the chief danger in pneumonia lies in a paralysis of the heart, in giving remedies one should keep clearly in mind not to give anything which from its nature has a depressing effect on the heart.

By lessening the temperature we remove the cause of functional disturbance of the heart's action, and naturally this is a prime indication. But we must not forget there is still another factor in weakening the heart, namely, the obstruction to circulation through-

out the pulmonary artery, and therefore we must remember not to give a remedy, which, while it reduces temperature, tends also to lessen the heart's force.

How can we fulfill this indication, to lessen the temperature without weakening the heart? Before answering this question let us take a look at the different methods which have been applied.

Lessening the temperature has been regarded by all schools as the chief indication, but the means employed have been widely different. Formerly the French School laid great weight on venesection in pneumonia, to secure a fall in the temperature, and a mitigation of the fever. This view obtained everywhere, and as soon as a patient began to show any fever the physician had to pull out his lancet and bleed him. In these days venesection has fallen into the back-ground, and only seldom employed.

Experience and the pathological result show that venesection has no direct influence on the inflammatory process. As palliative doubtless it has its value in a few cases. By some this method is still held. It may be of effect under certain conditions, namely: "in symptoms of cerebral pressure, *not* headache, delirium, *but* stupor, transitory paralysis," "when in the beginning of pneumonia there is rapid breathing not explained by the temperature, pain, or progression of the pneumonic process, as soon as the respirations increase to forty or fifty in the minute with serous frothy sputa, and the rattling in the chest after coughing does not disappear," we should immediately bleed freely in order to lessen the blood pressure, by drawing a part off. The danger of death by pneumonia in weak anæmic people is naturally increased.

The Venetian School praised the effect of antimonials in pneumonia. Certainly the temperature and pulse-frequency are lessened by them, and patients support them several days in large doses without any evil influence on the alimentary canal. However a direct influence on the pneumonic processes has not been proved.

Mercury in pneumonia is now a thing of the past I believe. Strange to say this was used particularly in pneumonia with children, exactly where severe treatment is not desired.

Next there came a reaction in the treatment of pneumonia. The expectant treatment came to the fore. The patient needed nothing but to lie still, and he would come through all right. This plan was especially recommended by Dietl of Vienna. He said, that by an expectant treatment not a single *uncomplicated* case of

pneumonia died, and he published statistics, wherein he showed, that he got better results by the expectant than by the systematic method. Were all cases of pneumonia light, and the extent of hepatization not great, it is quite possible that the patient might recover without any particular treatment. But in most cases such is not the case. If we took no notice of the hurtful influence of high temperature, and weakening of the heart, most of our patients would die, notwithstanding the innate tendency of the disease to recovery.

By the antipyretic method, which is now in the foreground, nitrate of potash, digitalis, veratrum, cold (baths, showering, wrapping), and quinine are the commonest means employed.

It is a physiological fact, that nitrate of potash does bring down the pulse and temperature, but the course of the disease is not shortened, nor has it any direct effect on the pneumonic processes.

The chief fever symptoms, high temperature and quick pulse, are not affected in any remarkable degree by the doses ordinarily given (3i-3i½).

Digitalis has been very extensively used in pneumonia. It works as an antifebrile, slows the pulse, and lessens the fever. According to Traube, digitalis acts directly on the local process in the lung. According to other authorities not. Nothnagle says, there seems to be a special *resistance* to its working in the height of the fever. Its effect comes so late at times that already the crisis has passed before we get it. Whether the duration of the disease is shortened by digitalis is still a question.

Thomas says the medium duration of the disease from commencement to defervescence by expectant treatment is the same as by digitalis. A cumulative effect is also to be feared by its use. The effect comes usually after some time, and then often with cumulative and toxic symptoms and paralysis of the heart, which last is specially to be feared. After we have stopped its use the effect continues some time in higher degree than by most other remedies, and if this effect comes after the crisis is fully established, then we have an effect that is of no more use. According to Liebermeister, in severe fevers generally digitalis is the less indicated the more excessive the frequency of the pulse is; moreover under certain circumstances it seems to hasten a threatened paralysis of the heart.

Veratrum is recommended by many as most effective against pneumonia. In Zürich and Berne veratrum is used as an anti-

febrile, especially in pneumonia, and now in America it is used largely. Observation shows it to be a very powerful anti-pyretic, in that it brings down temperature and pulse. According to some it has a direct effect on the pneumonic processes, an effect which others are not able to see. The fall in temperature is usually transitory, however it appears to hasten the ultimate defervescence. But in general there has not been any less mortality observed by its use than by the expectant treatment. Veratrum works quicker than digitalis, and in so far is superior to it. A cumulative effect is not so much to be feared with veratrum, as by digitalis, when given rightly. When veratrum is used, the pulse and temperature must be watched closely, and as soon as the normal temperature is reached it must be stopped at once. In hospital practice it can be given with more safety than in private practice, because its effect can be more easily watched.

Cold-water treatment is recommended by many, which consists in baths, showering, etc.; as a means for bringing down the temperature it certainly is of use, but in pneumonia we have a peculiar condition to remember, which we find in no other disease except pleurisy, viz., pulmonary obstruction and danger of paralysis of the heart. On account of the obstruction to circulation in the pulmonary artery, and consequent over-filling of the right side of the heart, this organ works at a disadvantage. Now, if we use a remedy which shall crowd more blood into the already over-filled heart, we do exactly what we ought not to do. The surface is cooled, its blood vessels contract, and the blood must be forced directly on the internal organs, and more especially the heart. On this ground there appears to me to be great danger in the use of cold water in pneumonia. In the other acute fevers, measles, scarlatina, meningitis, etc., this second factor in paralysis of the heart does not obtain, because there is no obstruction to the circulation, no over-filling of the heart. Where there is much pain, cold compresses to the chest sometimes give great relief.

In these different methods we see this: That venesection exerts no direct influence on the inflammatory process in the lungs, and is only a palliative under certain conditions.

Nitrate of potash, in the usual doses, has no particular influence on the temperature or pulse, and in large doses may produce toxic symptoms.

Antimonials have no effect on the local affections, and are not without danger in their effect on the heart.

Digitalis works sometimes too late, and is then perhaps cumulative.

Veratrum is a strong anti-pyretic, but its use is attended with danger, unless closely watched, for fear of sudden collapse.

Cold baths send the blood into the internal organs, especially the over-filled and over-worked heart.

For a long time quinine has been used with brilliant effect in malarial fevers, and now is used as anti-pyretic in all fevers. In continued fevers quinine works anti-pyretically no matter what the cause of the fever is. Binz declares it works directly against inflammation, and Skoda says the same.

How the fall in temperature is produced is not quite explained. According to Lewizky and Binz, the cause lies in hindering the process of oxydation.

Eulenburg and Lewizky attribute the slowing of the pulse and the lessening of pressure in the arterial system to a direct action on the heart. but whether on the muscle or on the motor nerves is not proved. Sick people bear larger doses of quinine than well people; especially in fevers large doses are well borne; they are necessary in fact to a decided fall in temperature and pulse. Large doses of quinine I believe to be the best treatment of pneumonia, and it should not be given often, but in large doses, one in thirty-six or forty-eight hours. Fifteen to twenty grains so given has more effect than the same amount in several doses. Milk and lime-water, brandy, champagne in generous doses, jacket poultices, and constant watchfulness are the price of success.

FAIRFIELD COUNTY.

NORWALK, CONN., May 18, 1880.

W. A. M. WAINWRIGHT, M.D., Hartford, Ct.:

DEAR DOCTOR:—I have not received any communication on “Matters of Professional Interest” from the members of our County Society. At the last meeting of the society at Bridgeport, the Clerk requested members to forward their reports to me for publication, and I have waited, hoping to receive something, but am sorry to report as above. During the few years past that I have acted as reporter for this county, I have received scarcely anything on which to reasonably found a good report at any time, and I have refused to act any longer.

Very truly yours,

WM. A. LOCKWOOD.

WINDHAM COUNTY.

DEAR DOCTOR:—Inclosed herewith I send you what has been contributed from this county. All the members have been personally solicited.

I had hoped to furnish something myself, but though having some material, have been too busy to arrange it.

Yours truly,

L. HOLBROOK.

A CASE OF COMPOUND DISLOCATION OF KNEE RESULTING FROM WEAKNESS OF LIGAMENTS.

BY JOHN COTTON, M.D., EAST WOODSTOCK.

In the evening of Jan. 11th, I was called to see a negro woman who was reported to have met with a serious accident while attempting to get out of bed. I found her with the left knee dislocated, and the lower end of the femur protruding through a large, ragged wound. On examination it was discovered that the wound extended transversely across the posterior part of the knee joint, and included fully one-half the circumference of the limb. The popliteal artery was ruptured, but the hæmorrhage was not very profuse. The leg was amputated at the joint, an anterior flap having been obtained sufficient to cover the stump.

She gave me the following history. She was forty-nine years old, married, had worked as a cook. She had always enjoyed excellent health until commencement of present disease. Five years ago she worked all winter in a damp basement kitchen, and slept at night where she suffered with cold. To this she attributed her subsequent troubles. During that spring she began to feel a numb sensation in her feet. During the summer and fall her big toe-nails came off. At this time she felt a weakness in lower part of back, accompanied by a dull pain which extended around both sides to lower part of abdomen. In the fall she noticed that her ankles were getting weak. They were liable to turn, and cause her frequent falls. Soon after, her knees also became weak. They gradually grew worse, and after a while began to bend backwards when she walked. She suffered much of the time with shooting pains in both legs. She came into this vicinity last spring, and did housework through the summer and fall. She wore supports attached to her shoes, to steady her ankles, but which did not prevent her walking mainly on the outside of her feet. Her knees both bent backwards to such an extent as to suggest the idea that they might sometime suddenly give way. She finally, in the winter, became so infirm that she was obliged most of the time to remain in bed. In the evening mentioned, while attempting alone to get up, she in some way met with the accident described.

On examination of the other leg, it was found that as she lay on her back, the lower part of the leg could readily be raised, the thigh of its own weight remaining in contact with the bed; and by using a little force it could be raised nearly to a right angle with the thigh. The knee permitted also a considerable lateral movement. The ankle was very lax, and readily permitted movements usually impossible. The muscular force and power of sensation were tolerably well preserved.

She rallied quickly from the operation, and the wound throughout its whole extent began to unite by first intention. On the third day a small discolored spot was seen, which spread rapidly, and about one-quarter of the outer side of the flap became gangrenous. After the line of demarcation had formed the dead portion was removed, the bone was protruded through the opening thus made, the condyles sawn off, and the edges of the wound then brought together. A few days after this operation she had a severe chill. The recent wound, which had been healing, opened and discharged a thin, fœtid pus. She remained in a low state for a few days, passing her urine and feces involuntarily; but soon she began to improve, and the wound to take on a healthy action. Soon after the chill, a large slough formed over the sacrum. When this separated it left the sacrum and coccyx bare. Near the lower end of the sacrum was a small piece of dead bone which was removed. I then learned that she had suffered previously with a sore in that locality, which had never healed, but which had been scabbed over for some time, and caused no trouble. Six weeks after the accident she was so weak that she could not be raised in bed without feeling faint, and she was evidently losing strength. The stump was healing very slowly. There was a tendency to the formation of bed sores wherever pressure from lying was allowed to be continued more than a few hours. The sore on her back measured four by five inches, and it was noticed that although it was healing on one side, it was extending even more rapidly on the opposite, notwithstanding every effort was made to prevent any pressure on it. It was surrounded by a margin of a peculiar copper color. I could obtain no history pointing towards syphilis, but it seemed to me probable that she was syphilitic, and I resolved to test the effect of iodide of potassium. After she had been taking about forty grains a day for a few days, she began to improve. Her appetite became better, the stump began to heal more rapidly, and the sore stopped spreading. After about a fortnight of this treatment, owing to constant nausea, I discontinued the medicine, thinking the large doses might be causing disturbance. But after a few days, as the healing process seemed to be checked, and as closer enquiry made it probable that errors in diet might have been the cause of the nausea and loss of appetite, I recommenced giving it in larger doses, and afterwards still further increased it to eighty or ninety grains daily. By April 15, the stump had healed, the sore measured less than two inches in diameter, and she had so far recovered her strength that she was able to be moved by her daughter out of town.

THE LOCAL USE OF CHLORAL AND GLYCERINE IN DIPHTHERIA.

C. J. FOX, M.D., WILLIMANTIC.

The following case, out of some seventeen in all, fully illustrates the efficacy of this plan of treatment:

Case of Miss A., aged five years, on the 12th of February last, complained of slight soreness of the throat. On examination, two diphtheritic patches on both tonsils about the size of a two cent piece were plainly visible. No fever or constitutional disturbance, not even any enlargement of the cervical glands. February 13th, the membranes were diffused, the engorgement of the glands was more apparent, and the fauces very red; temp. 38° C., pulse 112, urine normal. I ordered twelve grammes of the potass. chloratis mixed and dissolved in 140 of water, to be given in tablespoonful doses every two hours, and at the same I applied freely to the membranes chloral hyd., four grammes dissolved in 20 grammes of glycerine, by means of the camel's hair brush, three times a day.

Feb. 15. Temp. 40° C., pulse 126, membrane had ceased to spread, albumen was found in the urine. The treatment was continued. The p. m. of the same day the fever diminished, as also did the swelling of the fauces, glands, etc., and the child was relieved.

Feb. 16. No fever present, and the membranes had disappeared from the affected surfaces. I reduced the administration of the chlor. potass. solut. to one tablespoonful every three hours, and the chloral and glycerine to be applied only twice a day.

Feb. 17. The improvement was much more manifest, scarcely any redness or engorgement of the glands; urine normal.

Feb. 19. The cure was complete. All next day I continued the solution of potass. chloratis in doses of a tablespoonful every four hours, and ceased to use the chloral and glycerine.

One fact that may be especially interesting, the very moment the chloral and glycerine are applied, the false membrane ceased to spread, while on the second day after application, the characteristic fetor from the mouth was entirely absent. I have found that by dissolving the chloral in glycerine instead of water, it produces less of the burning sensation.

LITCHFIELD COUNTY.

W. A. M. WAINWRIGHT, M. D., *Chairman of Committee
on Matters of Professional Interest:*

DEAR SIR:—I have received no reports of cases from any of our members, and can only report briefly concerning the epidemics of the past year as presented before our county meetings.

The year has been free from epidemics of much severity, except perhaps a prevalence of pneumonia in Thomaston during the winter and spring, and of dysentery in Wolcottville last summer.

Mumps have been epidemic in Litchfield, Morris, and Winsted for some months past, and have shown a strong tendency to metastasis to the testicles in adult males, also two cases are reported of mastitis in the female. This is the more remarkable as many of our old physicians had never before seen a case of metastasis in either sex, and its existence is treated of as problematical by most authors. Its termination has always been favorable in four to six days.

Measles have occurred in Warren, and also in Colebrook and Winsted.

Regretting my inability to make a better report, I am

Very truly yours,

L. H. WOOD, M.D.,
Reporter for Litchfield County.

POINTS IN THE ETIOLOGY OF ICTERUS.

BY WM. DEMING, M.D., LITCHFIELD.

Until recent times icterus or jaundice has been defined as "a disease proceeding from obstruction of the liver, and characterized by a yellow color of the skin," and this definition, though somewhat incomplete, may in many cases be correct enough. But the recent remarkable researches of Gubler and Dreyfus-Brisach have shown that the characteristic yellow color of the skin may depend upon other causes than a mere obstruction (mechanical or otherwise) of the hepatic ducts, and may often assume a character of great pathological importance and therapeutical significance.

Passing by the most common and familiar form of icterus, which we may be pretty certain depends upon some mechanical obstruction of the gall-ducts, and which however puzzling to the

practitioner is but seldom dangerous to the patient, and to which Gubler has given the name of bilipheic icterus, I shall in this brief paper only touch upon those forms of the disease which are due to the abnormal transformation of the coloring matter of the blood, and to which the same author has given the name of hemapheic icterus.

It is to-day admitted by all physiologists that the biliary pigment has its origin in the coloring matter of the blood (hemoglobine) which is set free by the continual destruction of the red corpuscles of the blood, and that this transformation of sanguinary pigment into biliary pigment is performed in the liver in such a manner that, in the physiological condition, the hemoglobine will be eliminated with the bile—a humor which is in its nature eminently excrementitial. Now if under some morbid influence—such for example as that of a poison, a too-rapid destruction of the blood corpuscles takes place, the liver becomes powerless to transform all the hemoglobine thus set free into biliary pigment, and finding no longer a way of elimination through the bile, the hemoglobine—undergoing divers modifications while passing through the circulatory torrent—accumulates in the serum of the blood. To those pigments produced by this pathological condition, and which are derived from the partially elaborated hemoglobine, Gubler gives the name of hemapheine, and to the accumulation of hemapheine in the serum of the blood he gives the name hemapheisus.

This condition may also occur without undue destruction of the blood corpuscles if the liver is suddenly or profoundly attacked in its secretory activity—either as a sequence of organic lesion or of nervous or circulatory troubles. In both cases the liver is impotent to transform the sanguinary into biliary pigment, but for different reasons; in the former case the coloring matter is brought to the liver in too great quantity, and in the latter—while the quantity brought is normal—the altered liver fulfills its functions incompletely. In the first case may be placed as causes fevers, the hematuria of hot climates, certain poisons, etc., and in the second, nervous and functional disturbances and organic disease of the liver itself. When once accumulated in the serum of the blood, the hemapheine is eliminated in different ways, and with variable symptoms. One symptom which is never wanting is a special coloration of the urine, which also acquires characters, chemical and physical, which are thoroughly pathognomonic.

Elimination also takes place by way of the sudoriparous glands and the intestines. But if these organs do not act, or their action is insufficient, the hemapheine will impregnate the cutaneous tissues and deeper organs, giving rise to a color resembling that of the ordinary bilious jaundice. If certain affections—rheumatism for example, which produces a very considerable destruction of the blood corpuscles, or cirrhosis, which affects so profoundly the functions of the liver, rarely produce icterus—it is because the elimination of the hemapheine is accomplished by the increase of the secretions, most often by cutaneous transpiration, and next by intestinal evacuation.

Urine containing hemapheine differs in a notable respect from that containing only biliary matter. Its color is a yellow amber; instead of staining the linen an intense reddish green, it imparts a pale salmon color, and the addition of nitric acid determines a brownish red, like the color of the veins seen in old mahogany.

When hemapheine invades the integuments, it produces an icterus very different from the ordinary bilious jaundice. The color is rarely deep, but, so to speak, sub-icteric; it has a dirty pale sulphur tint. In hemapheism there is never any papulous eruption, as in common jaundice, nor any slackening of the pulse. Another most important diagnostic sign is that in hemapheism the fecal matter is almost always colored, while in common jaundice the stools have the well-known slaty-clay color. Hemapheism follows the march of the affection which produces it, but it is also in itself a symptom of great diagnostic value. If in any case of icterus an examination of the urine establishes the fact that the icterus is not due to the reabsorption of the bile, but to the presence of hemapheine in the blood, we may conclude that there exists in the patient either some cause of exaggerated destruction of the blood corpuscles or some alteration of the liver which impedes its normal functions. These causes will most often be found to be lead or alcoholic poison, or organic disease of the liver itself.

It is probable that the icterus of newly-born children is of a hemapheic nature.

RECORD OF FOUR HUNDRED CASES OF MIDWIFERY IN
HOSPITAL AND PRIVATE PRACTICE,

BY BRADFORD S. THOMPSON, M.D., SALISBURY, CONN.

There is no department of our science which merits more attention than the obstetrical, none possessed of more practical importance, none involving higher or more interesting questions; and any accumulation of facts, based upon purely statistical and trustworthy records, are always in order for discussion by medical men.

The following report includes a period of fifteen years—two years and a half in the U. S. Hospital service, and twelve and a half years in dispensary and private practice.

During this period, 250 females have derived assistance in private practice, and 150 females from hospital and dispensary service. From this number we must deduct 21 cases of abortion and one case of uterine hydatids, which will leave 378 cases of labor at the full term of utero-gestation. The number of children born amounted to 392, of which 202 were males and 190 females; 28 of them (17 male and 11 female) were still-born, or died immediately after birth; of these 28,

- 5 were premature.
- 2 “ breech presentations.
- 2 “ vertex and shoulder presentations.
- 2 “ funis presentations.
- 1 was a footling case with prolapsed funis.
- 1 was covered with syphilitic eruption.

The ages of the 400 were obtained as accurately as possible, and there were

51 cases under 20 years.	57 cases between 30 and 35.
99 cases between 20 and 25.	59 “ “ 35 “ 40.
129 “ “ 25 “ 30.	5 “ “ 40 “ 50.

400

It is not always possible to ascertain the exact commencement of labor, and where any cases were doubtful they have been omitted in the registry. For this reason, only the duration of labor in 357 cases are noted, instead of 400.

In 95 cases it was under 6 hrs.	In 8 cases it was under 48 hrs.
97 “ “ “ 12 “	7 “ “ “ 60 “
124 “ “ “ 24 “	6 “ “ “ 96 “
19 “ “ “ 36 “	1 “ “ “ 120 “

It may be well to mention that the great length of time some of the labors were allowed to continue did not arise from the neglect of the attendant, but from the patient's deferring so long her application for assistance.

The interval between the setting of true labor pains and the rupture of the membranes has been carefully noted in 322 cases.

In 80 cases it was about 2 hrs.				In 14 cases it was about 26 hrs.			
68	"	"	6	3	"	"	30
51	"	"	10	8	"	"	35
57	"	"	14	4	"	"	50
21	"	"	18	2	"	"	60
12	"	"	22	2	"	"	80
<hr/>							
322							

In the same number of cases the interval between the rupture of the membranes and the birth of the child was as follows :

Under 1 hr. in 156 cases.				About 15 hrs. in 9 cases.			
About 2 hrs.	"	60	"	"	20	"	3
"	4	"	51	"	25	"	5
"	6	"	25	"	35	"	1
"	8	"	7	"	40	"	1
"	10	"	3	"	50	"	1
<hr/>							
322							

From the birth of the child to the expulsion of the placenta, there elapsed,

In 89 cases 5 minutes.				In 3 cases 50 minutes.			
74	"	10	"	11	"	60	"
73	"	15	"	15	"	from 1 to 2 hrs.	
49	"	20	"	5	"	"	2 " 3 "
5	"	25	"	1	"	5 hrs.	
31	"	30	"	1	"	6 "	
7	"	35	"	1	"	8 "	
9	"	40	"	<hr/>			
374							

The cases in which so long an interval occurred between the expulsion of the child and the placenta had all been managed by midwives, who made application for assistance on account of the retention of the placenta.

In 392 cases the presentation was as follows :

In 361 it was natural.

4 the hand descended along with the head.

10 the breech presented.

13 the feet—in 3 of which funis prolapsed.

2 the funis presented.

2 the arm.

392

It has already been mentioned that of the breech cases 2 were lost; of the feet presentations, 3; of the funis, 2; of the arm presentations one child was extracted alive and the other was still-born.

There were seven cases of twins; their sexes were:

In the 1st case, 2 males.

“ 2d “ 2 “

“ 3d “ 1 “ and 1 female.

“ 4th “ 2 “

“ 5th “ 1 “ “ 1 “

“ 6th “ (premature) 2 females.

“ 7th “ 2 males.

10 males 4 females.

Of these, one male and two females (premature births) were still-born, or died immediately after birth.

As to the presentations in these cases; in four cases both the children presented naturally, and one child was lost; in the fifth case one child presented the breech and the other the arm; in the sixth case one child presented naturally and the other was a breech presentation; in these two last cases all the children were saved; in the seventh case the presentation of one child was natural and the hand of the other descended along with its head; both children were lost as the labor was premature. In five cases hemorrhage occurred before the expulsion of the placenta; and in two of them that organ had to be extracted. The flooding produced no unfavorable results.

Four patients had severe puerperal convulsions, and one died. These cases will be noted in detail hereafter.

One patient was threatened with convulsions, but by the timely employment of antiphlogistic measures she escaped.

In three cases version was practiced with considerable success. All the mothers recovered and one child was saved.

The forceps were successfully applied fifteen times. The mother recovered in every instance. Fourteen children were saved.

In one case the use of the perforator was required, from the narrowness of the pelvis; the patient recovered.

Out of 400 females four only died, and two at least of these, who were pauper patients outside of hospital, were indebted rather to the mismanagement of friends than to accident of labor for the fatal results.

The third sank from the effects of the shock of a tedious labor upon a constitution debilitated by severe pulmonary disease.

The fourth, aged 17 years, primipara, had had puerperal convulsions for three hours before my arrival, and before she succumbed had twenty more convulsions during a period of twelve hours. Her previous history was bad, having been married only six months; had unsuccessfully taken at different times nostrums for abortion, as suggested by two female acquaintances. Hemorrhage and anaemia carried her off. She was not under my observation before this visit; consequently could not state with certainty whether there was albumen in the urine or not; probably there was, with suppression of urine. There was also retention.

These cases will be related in a subsequent part of this report.

TEDIOUS LABOR. Writers, like Flectwood Churchill, of Dublin, have alluded to the influence which the length of the first stage has been supposed to exercise upon the entire process, and upon the well being of the mother and child. Taking the rupture of the membranes as the limit of the first stage, and referring to the tabular view, given by Churchill, of the intervals from the commencement of labor to the rupture of the membranes, and from the rupture of the membranes to the expulsion of the child, it has been observed:

“1st. That the length of the period after the evacuation of the liquor amnii bore no proportion to the time which elapsed previously;” and

“2d. That the constitutional effects of labor are not to be estimated by the length of the first stage.”

In order to bring these opinions to the strong test of statistical inquiry, 22 cases of tedious labor have been selected from my register, the duration of which was 36 hours and upwards, and the duration of the 1st and 2d stages of labor in each case respectively have been marked, with the results of the labor to the mother and child.

1st Group.—9 cases of labor, 36 hours duration.

No. of cases.	Length of 1st stage.	Length of 2d stage.	Results to	
			mother.	child.
In 5 cases,	35 hrs.	1 hr.	Favorable.	Favorable.
2 “	34 “	2 “	“	“
1 (premature)	32 “	4 “	“	Dead.
1 case,	25 “	11 “	“	Favorable.

2d Group.—4 cases of labor lasting 48 hours.

No. of cases.	Length of 1st stage.	Length of 2d stage.	Results to	
			mother.	child.
In 1 case,	47 hrs.	1 hr.	Favorable.	Dead.
			(funis presentation.)	
1 “	47 “	1 “	Favorable.	Favorable.
2 “	45 “	3 “	“	“

3d Group.—6 cases of labor of 60 hours.

No. of cases.	Length of 1st stage.	Length of 2d stage.	Results to	
			mother.	child.
In 3 cases,	59 hrs.	1 hr.	Favorable.	Favorable.
1 “	57 “	3 “	“	“
1 “	53 “	7 “	“	“
1 “	39 “	21 “	“	“

4th Group.—3 cases of 96 hours.

No. of cases.	Length of 1st stage.	Length of 2d stage.	Results to	
			mother.	child.
In 1 case,	95 hrs.	1 hr.	Favorable.	Favorable.
1 “	93 “	3 “	“	“
1 “	90 “	6 “	“	“

The importance of this small series of well-authenticated facts will be at once perceived, and its bearing upon the late controversy years ago, between Dr. Hamilton of Edinburgh, and Dr. Collins of Dublin, on the consequences of allowing the first stage of labor to exceed a certain time. As far as they go, they coincide with the views of Churchill, Collins, and others, and are diametrically opposed to the conclusions advanced by the distinguished author, the late Dr. Hamilton—and enforced by other observers. In none of these cases did the extraordinary length of the first stage “render the powers of the uterus inadequate to expel the infant with safety to its life or to the future health of the patient;” for out of 21 cases of tedious labor in the first stage, in only one instance did the second stage exceed eleven hours; in 17 it was

completed in three hours; none of the mothers were injured, and only two children were lost, one of which was premature, and the other a funis presentation, and both deaths consequently independent of the duration of the labors. Neither did the secondary evils, "retention of the placenta, fatal hæmorrhage, or febrile and inflammatory affection," follow such prolonged first stage, for every one of the women recovered well. Then I would conclude that the duration of the second stage, and the results of the entire labor, have no relation to the length of the first stage, and further, there is at least negative evidence that it is upon the second stage that the character of the labor and its result depends, for out of 22 very tedious labors, there was not one tedious convalescence—but then in all but one, the second stage was short. The causes of delay were such as mentioned by standard authors on the subject—premature evacuation of the liquor amnii, rigidity of the soft parts, depression of the anterior lip of the os-uteri, etc.; and the treatment was in accordance with the recommendations of writers of authority.

One of the four fatal cases was a case of tedious labor.* At the same time in accounting for her death, it must not be forgotten that she had suffered from a severe pulmonary complaint before and during parturition.

She was admitted into Key West Hospital, Florida, on the evening of the 8th of April, 1864. She had some pains, which completed the first stage in 26 hours, without the slightest exhaustion or acceleration of pulse. The progress of the head, after it entered the pelvis, was slow, though perceptible for the next twelve hours, but as the 2d stage was so prolonged it was deemed advisable to call in the Medical Director of the Department, who gave it as his opinion, that the patient's strength was adequate to the delivery without assistance. In this he was right, for in two hours afterwards a male child was born, and the after-birth was expelled in half an hour. The pulse immediately after delivery was about 120, and she seemed much exhausted by the length of the labor, and by her cough. She sank on the third day without any marked symptoms.

VERSION CASES.—It was found necessary to extract the child by the feet in three cases.

In the *first* case the arm presented with a loop of the funis. The waters had been discharged an hour and a half before assistance was obtained, and the uterus was acting briskly. The late Dr. E. R. Peaslee of New York, succeeded, with some difficulty, in extricating the child, which was still-born. The woman made a good recovery.

The *second* case was one of twins; the first child presented naturally, and was born after a short labor, but on making a vaginal examination, a second was found, presenting an arm; the child was turned instantly and extracted alive. The operation was facilitated by the previous transmission of the first child through the passages. Both the children, with their mother, did well.

The *third* case was a funis presentation. The waters were evacuated at 3 p. m., and then the prolapsed portion was discovered. On my arrival at 4 p. m., the funis still pulsated, and as the woman seemed to be well formed, turning was attempted to save the child. The extraction was executed with sufficient rapidity, until the head arrived at the upper strait, but so much delay then took place that the child was lost. The late Dr. H. D. Bulkley of New York, was in attendance with me. The woman recovered.

CROCHET CASE.—Perforation of the child's head, and extraction was performed once under very unfavorable circumstances.

The patient, Susan McCann, æt. 29, had suffered from ill health during the latter month of pregnancy. She was taken in labor on the 7th of August, 1870; the pains for two days continued moderate, and were gradually increasing in strength, when they were suspended in consequence of a quarrel with her husband. She remained for many hours with but very feeble pains, and probably without any real progress.

On the 12th of August, at 7 a. m., I was summoned and found the head presenting, and impacted in the upper strait. The waters had not then discharged, the bowels were constipated and the urine retained. The pulse was very quick, and the skin hot and dry. The catheter was passed, and a quart of fetid dark-brown urine drawn off, a purgative enema was given, and the membranes ruptured. Strong uterine action followed, with pains recurring every five minutes.

In the evening a consultation was held with Drs. Peaslee and Underhill, and as all the constitutional symptoms were aggravated without the least advance of the head, it was thought hazardous to defer the delivery any longer. The head was lessened and the child extracted in half an hour, followed shortly by the placenta. The woman recovered without a bad symptom. The history of the early part of this case is as indistinct as the management was mischievous, and owing to the same cause, viz., the stupidity of the female attendants, and the drunkenness of her husband. She was almost delirious from long-continued pain, and incessant teasing of the women, and considering that the operation was performed in a wretched cellar, great inconvenience, and under sundry threats of bodily chastisement from the drunken husband and his fellows, it is a matter of surprise that the case was so successful.

Of the cases of retained placenta, two are worthy of notice.

The first occurred after a premature labor, and it was found impossible

to remove the placenta, although it was desirable to have done so, on account of a considerable loss of blood. We had recourse to the plug which effectually restrained the hæmorrhage, and enabled us to wait the expulsive action of the uterus. This was not excited till 60 hours after the birth of the child. The woman suffered a good deal from irritative fever, but by strict regimen and appropriate treatment, the patient recovered.

The second case had a less favorable issue, though her labor terminated quite well. She was delivered of twins, in the 7th month of her pregnancy under the care of a midwife. The first child was after a labor of 24 hours duration, at 10 P. M., Sept. 10, 1868; and the second at 11.30 P. M., the same evening. The first presented with the head, and the second with the head and hand.

Between the birth of the children considerable hæmorrhage took place, but it was not until some time afterwards that assistance was called for. On my arrival the patient was found greatly reduced, the surface of the body cold, and the pulse almost imperceptible, etc. As the after-births were still retained, they were removed by the introduction of the hand, ergot and stimulants having been previously administered. Two days after, the abdomen became painful and tender and the pulse accelerated. Ten ounces of blood were taken, and sulphate morphia prescribed. This treatment succeeded and the patient became convalescent on the 18th. That very evening she got out of bed, quarrelled and fought with her husband and sister, and took considerable poor whiskey and water. In the course of the night she was attacked with rigors, abdominal pain, and the following day presented symptoms of abdominal inflammation with great sinking. In spite of the most diligent efforts she sank during the second night from the last seizure. We obtained permission to examine the adominal viscera, but after the most diligent search could discover no morbid appearance. There was neither peritonitis, enteritis, nor rupture, so that we learned nothing as to the immediate cause of death.

With regard to the third fatal case, a few words may be added. She was delivered safely of an acephalous fœtus, and was progressing satisfactorily, until some imprudent person showed the child to her. She was taken ill immediately afterwards, and died with symptoms of intestinal inflammation. No *post-mortem* could be obtained.

Puerperal Convulsions.—The four following cases of puerperal convulsions occurred in my practice within a period of a year and a half. In three cases the patient was not under my observation previous to the convulsions, consequently could not get a satisfactory or reliable history of them. These patients resided on Mt. Riga, 1,570 feet above sea-level.

Mrs. S., aged 40, mother of three children, in nearly the ninth month

of pregnancy, called me in, while passing, Oct. 24, 1877, and stated that she was suffering from bronchitis, with much pain in the head at the frontal region, also constipation. Ordered three Squibbs' triplex pills, simple cough mixture, and bromide potassium. According to her statement, the urine was normal in quantity and color. The understanding was that if she did not get along, I was to be again notified. At 9 A. M., 27th, was summoned, and found her in severe convulsions, with some labor pains. Kept her constantly under the influence of chloroform until she was delivered of a child at 4 P. M. In fifteen minutes after the birth of the child she went into a convulsion which lasted half an hour. During the succeeding sixteen hours she had twelve convulsions. Chloroform was freely used, and one drop of croton oil was given. Every three hours a mixture of sulphate morphia, chloral, and bromide of potassium was given *per rectum*. On the 30th she became conscious, and recovered slowly. She was catheterized once or twice daily for ten days after the birth of the child. Dr. W. W. Knight of Sharon, Ct., saw the case in consultation. Mother and child are now in excellent health.

At 11 A. M., January 16, 1878, was called to see Mrs. B., multipara, æt. 27, who had had four convulsions in the eighth month of pregnancy. When I arrived, found the bladder much distended, and used the catheter; about two quarts of dark coffee-colored urine was drawn off. One drop of croton oil was given to open the bowels. On examination, found the os dilated to about the size of a silver quarter of a dollar, and the head presenting.

When I arrived she was in convulsions, and continued in that condition nearly all the while until delivery of a living child at 4.30 A. M., 17th. Half-drachm doses of fl. ex. ergot were administered every three hours *per rectum*, with the mixture of morphia, chloral, and bromide of potassium. Two convulsions recurred after delivery. She regained consciousness on the 20th, and entirely recovered. The child died on the twentieth day after birth.

She had a child also May 8, 1879, which is in good health.

One month before the birth of the last child, she complained of intense headache, dullness of vision, and difficulty in micturition, which passed away under the use of cathartics and diuretics.

The third and *fatal* case of convulsions, that of a primipara, æt. 17, which has been alluded to on a preceding page.

During a period of fifteen hours she had more than twenty convulsions. When summoned, May 20, 1878, the messenger stated that she was in fits. On my arrival, 11.30 A. M., the patient was sitting in a chair with complete loss of sight, and moderate labor-pains. Was put to bed and catheterized. A pint and a half of intensely dark and fetid urine was taken away. Elaterium, in $\frac{1}{2}$ -grain doses, was given every hour for three hours, when she defecated. Her mother informed me that she had no movement of the bowels for one week previous. An ordinary enema

was also given. Ten ounces of blood were extracted from the arm. Ice was applied to the head and upper part of the spine: Hydrate of chloral, bromide potassium, and fl. ex. ergot were given *per rectum*, as usual. Sulphate morphia was also administered hypodermically every three hours. At 2.30 A. M., 21st, she was delivered of a still-born child, much decomposed.

To all appearance, after the birth of the child, there was a fair prospect of recovery, as the convulsions had ceased. Two hours after birth, just as I was leaving, the attendant announced that she was sinking and flowing enormously; she succumbed in half an hour.

The fourth case, March 17, 1879, was that of a primipara. Mrs. K., æt. 17, who was delivered of a still-born child by instruments, and had ten convulsions, but recovered. The treatment was in the main similar to the second case.

Only one more case will be noticed—that of *uterine hydatids*. Bridget Farley, æt. 30, the mother of three children, and generally enjoying good health, menstruated regularly up to the end of August, 1869—the menses ceased after that time, from pregnancy, as she believed. About a month afterwards, there was a slight discharge from the vagina, resembling blood and water, which continued three months or more, up to Dec. 20, 1869, when she was attacked with labor-pains, and all the signs of abortion, except that of an ovum; a large basinful of hydatids was expelled with considerable hæmorrhage. She recovered perfectly under the ordinary treatment.

Read before the Litchfield County Medical Society, January 13, 1880

MIDDLESEX COUNTY.

SAYBROOK, May 11, 1880.

DR. W. A. M. WAINWRIGHT, HARTFORD, CONN.:

MY DEAR DR.:—In pursuance of my duty as reporter for Middlesex county, I sent a written request to each of the members, asking that an account of such matters of "Professional Interest" as might be at their command should be sent to me as early as the middle of April. A few informed me that they had nothing to communicate, from the remainder I have learned nothing. From what I have learned by conversation with physicians in the county, and from my own experience, my belief is that the past year has been characterized rather by the absence than the prevalence of zymotic diseases.

A malarial element has, however, been very noticeable in all forms of disease, and consequently the anti-periodical remedies more in demand.

In this connection it is perhaps well to reiterate what has already been said from this county with regard to the usefulness of the cheaper alkaloids of Peruvian bark, especially the cinchonidia, the doses of which are necessarily but little, if any, larger than of quinia.

Fearing that this is a matter not sufficiently appreciated, allow me briefly to summarize what I consider its advantages:

First. It is a great pecuniary saving to the poorer classes of patients.

Second. It is a matter of considerable importance to those of us who dispense our own medicines, and of necessity, lose quite a proportion of what we have invested in drugs.

Third. It utilizes more of the total amount of the bark imported, thus, in a measure lessening the demand for a drug which is constantly becoming more scarce and expensive.

Fourth. In my experience it is less apt to produce einchonism when given in full doses than is quinine.

Sincerely yours,

J. H. GRANNIS, M.D.,

Reporter for Middlesex County.

TOLLAND COUNTY.

A CASE OF IDIOPATHIC TETANUS.

BY F. L. SMITH, M.D., STAFFORD SPRINGS.

William C., age, twenty-four; nationality, Irish; occupation, weaver of woolen goods, had never had any serious sickness. I was called to see the patient on the evening of August 17th, and learned the following history: On the preceding Friday, August 9th, the man complained of a cold, with stiffness about the jaws; that he disliked to talk or eat on account of the fatigue caused thereby. He had been working for several days with wet feet, caused by leaky shoes, and attributed the trouble to that. As he became no better, on Sunday, August 11th, a doctor was summoned. The patient was at this time up and about the house, having hop poultices applied to the throat and jaws; he was informed by the doctor that he was following the proper course. The evening of Friday, the 16th, the writer was summoned. Found the man in bed, with anxious countenance, profuse perspiration, pulse 100, temperature in the axilla 102.5° F., respiration 28, urine normal, and bowels constipated. He was covered with a bright-red rash, which I judged to be the effect of some medicine he had taken. At short intervals he was seized with spasms of pain at the epigastrium, lasting from one to three minutes. The jaws were firmly closed, and any attempt to open them brought on spasm; marked opisthotonos; mind clear; had obtained little sleep for three or four nights. Very careful inquiry and inspection failed to elicit the history of any cut, bruise, sprain, or injury whatever; the disease could be referred to no cause. I immediately pronounced the case one of tetanus, and put the man on a drachm of chloral hydrate every two hours, and all the milk he would take.

August 18th, eight A. M. Found the patient more comfortable, sitting up in bed; reported having passed the best night since his sickness commenced; slept considerable; muscular rigidity somewhat relaxed, but unable to open the mouth; pulse, 96; temperature, 98.6°. Kept him on chloral, with generous nourishment.

Seven P. M. Has had a comfortable day. Was moved down stairs; had to be carried, on account of stiffness of muscles of the back; pulse, 100; temperature, 100.5° F.

August 19th, eight A. M. Pulse, 90; temperature, 98.5° F.; indicating improvement, notwithstanding which he did not have as comfortable a night. No improvement as regards muscular rigidity of jaws or back; spasms rather more frequent. Pressed the chloral. Gave him three compound cathartic pills, and added stimulants to the milk. Eruptious has disappeared.

Eight P. M. Pulse, 100; temperature, 100.5° F. Locates a constant pain at one inch below and two inches to the right of navel; the point

can be covered with the finger tip; but nothing appreciable to sight or touch; no tenderness on pressure; abdominal muscles rigid, with sunken belly. Complains of the chloral "driving the breath out of him"; no improvement of jaws and back. Gave him one-fourth grain of elaterium every hour until bowels moved, as pills and injections have had no effect.

August 20th, 7.30 A. M. Pulse, 98; temperature, 99.6° F. Has not taken his chloral at all regularly through the night, says he cannot swallow it; deglutition very difficult; some of the medicine returning; spasms the same; pain near navel gone; bowels moved after three doses of the elaterium. Substitute one-eighth grain of morphia every two hours for the chloral, and press the nourishment and stimulants.

Eight P. M. Pulse, 96; temperature, 100.6° F. Condition remains unchanged; refuses to take stimulants. Give them by rectum, and keep perfectly quiet, this having been enjoined at every visit. Continue same treatment.

August 21st, eight A. M. Pulse, 108; temperature, 99.4° F. Complains of a constant pain at the epigastrium, increased during spasm; deglutition difficult; has not taken as much nourishment during the night; very restless; wants his position constantly changed, and when this is attempted it brings on spasm; body perfectly stiff when moved. Continue morphia and stimulants.

Eight P. M. Pulse, 108; temperature, 101.5° F. More restless; spasms recurring more frequently; takes no nourishment except by rectum; left hand strongly adducted; cannot turn in bed. A foamy saliva is constantly collecting in the mouth, blown through the teeth, and wiped away.

August 22d, seven A. M. Pulse, 118; temperature, 103.6° F. Deglutition very difficult; muscular rigidity becoming more general; spasms excited by attempting to speak or take liquids, and very frequent when not brought on thus.

Six P. M. Seen with Dr. Cassidy of Norwich. Pulse, 140; temperature, 104.8° F. Spasms recurring almost constantly; power of deglutition nearly gone; patient says he shall die. Give him ten drops of Magendie's solution hypodermically, as he complains a great deal of the constant pain at the epigastrium. Give injections of whisky and quinine. Diagnosis and prognosis confirmed by Dr. C.

At eleven o'clock of the same evening, while giving a half-teaspoonful of whiskey by the mouth, the patient began to struggle for breath. Thinking that some of the liquid might have entered the trachea, I turned him on his face, with head depressed; the struggles continuing, I turned him back, and found the countenance livid, with blue lips, and in less than a minute all struggles ceased, and the man was dead. The muscles of respiration having been suddenly attacked with the spasm, he was unable to take another breath, and so died, asphyxiated.

I might add that, just at the last, after he was apparently dead, a series of general muscular spasms ensued, constant and very rapid, lasting for perhaps two minutes. No autopsy could be obtained.

I have been led to report the case in detail on account of the extreme rarity of tetanus as an idiopathic affection. Flint, in his work on Practice, says: "Idiopathic tetanus is everywhere rare, and in cold or temperate climates is one of the rarest of affections." An interesting feature of the case was the extreme frequency of the pulse during a spasm, it running up forty to fifty beats, and as rapidly subsiding when the spasm was over. Again, it will be observed that the temperature followed almost regular fluctuations for three days, being 98° and 100° respectively morning and evening for two days, then 99° and 100°, the next 99° and 101°, and then came the rapid rise, indicating the approaching end. The bladder was at no time affected, and the urine was normal throughout. The mind was perfectly clear up to the moment of suffocation. The disease lasted fourteen days from the time of the first sensation of stillness about the jaws.

DISSERTATION.

SOME LIMITS IN THE USE OF THE OPHTHALMOSCOPE.

W. H. CARMALT, M.D., NEW HAVEN.

Such very exaggerated opinions are occasionally expressed by those not familiar with the powers of the Ophthalmoscope, of the value of appearances in the fundus of the eye as indicating disease inside the cranium, that it has seemed advisable to point out some of the fallacies which exist as to their true relations, and to define the limits, so far as time will permit, of ophthalmoscopy, indicating similar or corresponding conditions of the brain.

The brilliant discovery, in 1851, of Helmholtz, the greatest of modern physiologists, by which the nervous expansion of the eye, with its beautiful network of vascularization, could be exposed to view and studied under perfectly natural conditions, was enthusiastically hailed as opening a rich field for both physiological and pathological investigations. I do not hesitate to claim for it almost unbounded limits in the determination of ocular disease. It is the creator of modern ophthalmological science. But does it do more than this, and how much more?

The opinion was very soon expressed that the circulation of the brain was shown by the circulation of the retina; that an hyperæmic or anæmic condition of the former was indicated by corresponding conditions in the retinal circulation, and after this other more remote and positive pathological conditions were claimed to be actually detected or proven by ophthalmoscopic observation. These opinions have been kept before the Profession principally by gentlemen working in the field of Neurology, but have become gradually less and less advanced, as the observations multiplied, by those making ocular diseases a study. Bouchut (1)* would have us believe the most varied cerebro-spinal diseases are each indica-

* See Bibliography at end of article.

ted by such especial changes in the eye that they may individually be recognized by the ophthalmoscope. He would show us a spinal (optic) neuritis, a neuritis from locomotor ataxia, from chorea, from diphtheria, from cerebral hæmorrhage and softening, from tuberculous, typhoid, and rheumatic meningitis, from hydrocephalus and thrombosis of the cavernous sinus, from encephalitis and the encephalitis of cardiac disease, from tumors of the brain and general diseases as syphilis, albuminurea, leucocythæmia, and indeed a neuritis resulting from paralysis of the 6th pair in consequence of certain kinds of epilepsy, hallucination, contusion of the brain, etc. If this were really so can it be doubted that ophthalmologists would not gladly recognize it, and utilize a field so obviously to their professional advantage?

Let us study, for a moment, the connections between the brain and the eye, which are, as you all know, the optic nerve and its sheaths, the retina being the terminal expansion of the former. The vascularization of the retina through the *arteria centralis retine*, does not hold nearly the same intimate relation with the brain, that its appearance in the fundus at the center of the optic nerve would suggest. It first enters the nerve at some fifteen or twenty millimeters behind the globe. It is one of the dozen, more or less, branches into which the ophthalmic artery divides, and the second in point of numeration. It is not given off from the ophthalmic artery until after this has entered the orbital cavity. The ophthalmic artery is given off from the internal carotid just as this enters the skull; and the next branches from this again, the anterior and middle cerebral and posterior communicating arteries, are not given off until after entering the Sylvian fissure. So far as the retinal artery is concerned, there is no more reason, from its origin, to suppose that changes in it would indicate changes in the brain, than that the lachrymal or palpebral branches of the same main stem should indicate them; nor is there any more reason to suppose the circulation of ophthalmic artery itself, to be influenced by changes in the terminal distribution of the internal carotid, than that variations in the temporal artery, would be indicated by corresponding differences in the circulation of the tongue.

Studying further the way in which the retinal artery gains access to the center of the optic nerve, we find it very distinct from any connection with the brain. Originally developed in the middle blastodermic membrane, while the brain and eye are devel-

oped from the external, their connection is formed during the process of development by a duplicature of the secondary optic vesicle wrapping around the artery, the applied surfaces then becoming fused together in the manner familiar to Embryologists as occurring in numberless organs and tissues. It is not a penetration through the nerve tissue of the vessel, but the nervous elements grow to envelope the artery.

The first detailed description we have of the phenomena of retinal circulation dates from Coccius (2) in 1853, though Van Light (3), a pupil of Donders, independently of Coccius' observations, published an article on the subject, in Holland, at about the same time. These were soon after followed by an exhaustive article by Donders (4) himself, reviewing both and criticising v. Graefe's (5) views on the same subject. Since then but little has been added to our knowledge of the phenomena attending the physiological circulation of the retina. By these observations it was shown: *first*, that there is a physiological venous pulsation, variable in force in different individuals within the limits of perfect health, and quite independent of changes in the general circulation: *second*, that there is no physiological arterial pulsation: *third*, that the latter may be produced by slight external pressure upon the eye ball, but that increase in the rapidity or force of the general circulation alone does not bring it into view: that, if present, it is evidence of increased tension in the coats of the eye only. It shows ocular conditions, but nothing else. Even the statements of such experienced observers as Quincke (6) of Berlin, Becker (7) of Heidelberg, and Landolt (8) of Paris, that aortic and mitral insufficiency is communicated perceptibly to the retinal circulation, causing arterial pulsation, must be taken guardedly. Dr. Loring (9) of New York, reports a case of pronounced aortic insufficiency, where "the murmur could be heard at a distance from the patient; there was tumultuous beating of the chest, with exaggerated pulsation in the vessels in the neck, . . . till they nearly entered the skull. The superficial vessels could be seen to pulsate . . . at the temples . . . Indeed the pulsation of the united vessels was so great that the head was constantly tremulous. Yet, notwithstanding this, there was not the slightest pulsation in the arteries of the retina." What Allbutt (10) means, therefore, when he says, p. 38, "arterial pulsation is never visible under any circumstances, natural or artificial," I cannot imagine; the phenomena having been minutely described by Jaeger (11), Van Light (l. c.), v. Graefe (l. c.), and

Donders (l. c.) in 1854 and 1855, and its mode of production, been more or less the subject of discussion ever since; unless it be, as might, by a stretch of imagination, be inferred from the context, that he is referring to normal eyes alone. Assuming this, however, and the statement is so broad that the concession can only be granted under protest, it is still untrue, as may be verified by any beginner in ophthalmoscopy. I am obliged to regard this either as an instance of inaccurate observation or of loose or forced generalization, to both of which this author is very liable, and which have brought his statements with regard to ophthalmoscopy in brain and nervous disease, certainly among ophthalmologists, into deserved disrepute.

We have been accustomed, based upon a long course of observation in various physiological conditions, as well as in disease and by direct experimentation upon the lower animals, to believe that variations take place in the cerebral circulation; we have founded thereupon a more or less complete system of rational therapeutics, and are most of us satisfied, from the fairly constant results obtained, that certain drugs produce certain definite alterations in the cerebral blood supply. It would certainly seem, if the assertions of those who claim that cerebral hyperæmia or its opposite, in diseases of that organ, are indicated and may be diagnosed by the ophthalmoscopic appearances in the retinal circulation, are to be accepted, that the ophthalmoscope would reveal, in the artificial cerebral conditions mentioned, the corresponding retinal circulatory changes, and by reversing the reasoning, would enable us with tolerable certainty to determine the condition of the brain by the appearances in the retina. Statements to this effect have been made with the utmost positiveness by various authors, but when we note the circumstances and conditions under which the examinations are made, details of the manipulations employed, and consider the fact that some, at least, of the observations are made to support a theory, we are compelled to be sceptical or to regard the methods employed as being so incomplete as to be worthless from a scientific point of view.

In striking contrast to most of these investigations is to be regarded the series of experiments made upon rabbits, by Dr. John Hunter Arbuckle (12), at the time clinical assistant at the West Riding Lunatic Asylum. These observations were all made by fastening the animal immovably upon Czernaek's holder; the eye kept open by a spring speculum; a fixed ophthalmoscope used;

the eye observed and a drawing of the fundus made before the experiment was begun. During the whole experiment Dr. Arbuckle kept his eye constantly applied to the ophthalmoscope; the experimentation, namely, the application of the drug, etc., was made by an assistant; in every case, the amount given was sufficient in the end to cause death. The observation was continued until that took place, and an autopsy of the brain and eyes was afterward made. It would seem that every precaution necessary to obtain trustworthy observations was taken, and the investigation carried to completion.

Dr. Arbuckle used nicotine, atropine, aconitia, hydrate of chloral, nitrate of amyl, prussic acid, strychnine, hyosciamine, morphine and picrotoxine, nitrate of amyl and picrotoxine, atropine and picrotoxine, and hemorrhage, to produce death. *In absolutely no one single instance, from the administration of a drug, was there any change to be seen in the circulation of the fundus of the eye, during the life of the animal.* In the case of death from hemorrhage, where both carotid artery and jugular vein of the left side were divided and the animal died in a few seconds, the vessels of both eyes quickly lessened in calibre, became reduced to half their size, which condition remained after death. Changes also took place *after death* in the cases where nitrate of amyl, morphia and picrotoxine, nitrate of amyl and picrotoxine, and atropine and picrotoxine had been given. These changes were those of contraction of the vessels and a disposition of the column of blood to break up. In the face of these observations, does it not seem absurd to talk about the effect of a therapeutical dose of medicine as having an influence upon the circulation of the eye to be seen by the ophthalmoscope?

Dr. Hammond (13), of New York, states that Dr. Roosa noticed after the administration to him, Dr. Hammond, of a large quantity of quinine that the capillary circulation of the external ear, as also that of the membrani tympani, was greatly increased, and he further states that an increase in the retinal circulation, shown in a greater distention of the calibre of the vessels, was evident also, and from this he argues at length a corresponding condition of cerebral hyperaemia. Now we must acknowledge an entirely different mechanical condition in the eye and retinal vessels from that of vessels distributed to the external skin. The retinal circulation is constantly under the influence of a nearly steady hydrostatic pressure. And, as has been mentioned, the changes

which the retinal circulation shows in the pulsation of the arteries are due to a variation in that hydrostatic pressure, namely, to an increase of tension, those of the skin and membrani tympani not being subjected to this force. The same thing holds true for the brain, which does not fill out the skull as the vitreous body does the corneo-scleral coat, and which we all know physiologically pulsates under the influence of the heart as well as in unison with the respiration.

Without pretending to doubt the accuracy of Dr. Roosa's observation in that case, it must be stated that he has since reported to the New York Ophthalmological Society other cases in which a similar dose had been given and where he was unable to detect the corresponding changes in the retinal circulation. Doctors Loring and Curtis observed for six hours continuously, the retina of a man to whom they had given a large dose of quinine. They were neither of them able to detect the slightest differences in the retinal circulation during that time. It would seem therefore that the case mentioned must, so far as our present information goes, be taken as an individual idiosyncrasy rather than as establishing a law.

When we study the anatomical distribution of the arterio-venous capillary circulation of the nerve, nerve-disk, and retina surrounding it, as has been done of late years by Schwalbe (14), Leber (15), Michel (16), Schmidt (17), Wolfring (18), Manz (19), and others, it will be seen, that this has not the close anatomical relation with that of the brain which some authors, notably Galczowski (20), have asserted, and upon which the so-called cerebroscopists rest their main anatomical argument. The latter asserts an independent capillary circulation for the optic nerve and disk from that of the rest of the retina. According to Leber and Wolfring, the capillary circulation of the disk is derived from twigs of the central artery, given off after entering the nerve, and anastomosing intimately just behind the optic nerve entrance with branches derived from the short ciliary arteries entering the sclerotic in the immediate vicinity. Behind the point where the central retinal artery pierces the nerve, the capillary nerve circulation is derived from twigs sent back from the same artery anastomosing again with capillaries derived from the pia mater; this anastomosis is very complete and intricate; and although, as shown, there is a certain connection between the capillary circulation of the disk and that of the pia mater, still, before arriving at

the optic nerve entrance, it passes through such a net-work of communication with other branches not derived from the pia mater, that the influence of this latter portion is reduced to a minimum, if shown at all; and when observers, in describing the conditions of the optic nerve disk in brain disease, describe it as congested—as too red—as redder than usual—perhaps as swollen—they but state conditions which every Ophthalmoscopist, engaged principally with ocular disease, meets every day. There is not an Ophthalmologist in the country, of a fair practice, who does not meet almost daily, in eyes physiologically normal, and in persons in whom there can be no suspicion of brain trouble, functional or otherwise, precisely similar conditions to those described by the advocates of cerebroscopy as indicative of conditions of the brain. The variations in color of different optic disks are as manifold as the differences in color of the cheeks. A flush upon the cheek of one person may indicate disease, while in another it is a perfectly normal condition; and a comparative redness or flush of one disk is not necessarily an evidence of disease even of the eye under observation, unless it has been examined sufficiently often beforehand to establish its normal hue; how much more problematical, then, to consider from one examination of an individual supposed to be suffering from some disease of a remote organ that the appearances here indicate the nature of, or are even associated with, disease there. We must take into consideration the characteristics of the individual. These conditions of the eye we find also due to many local causes. The strain on the accommodation in Hypermetropia or Astigmatism, the inflammations associated with Myopia, are both potent causes for producing capillary congestions of the fundus. I meet them constantly among students, suffering *only* from errors of *refraction*.

When therefore Allbutt and others, writing from the standpoint of the effect of nervous disease upon the retinal circulation, assert a condition of *æmia* or *hyperæmia* of the central retinal vessels when the brain is supposed to be similarly affected; and when they go so far as to say, that *hyperæmia* or *æmia* of the retinal vessels indicates a condition of *hyperæmia* or *æmia* of the vessels of the brain, their statements show so meager a knowledge of the conditions influencing the retinal circulation, that they obtain credence only among those unacquainted with the details of the circulation of the optic nerve and retina, or not familiar with the variable appearances of the healthy fundus, and not posted in the literature.

While, therefore, acute changes in the cerebral circulation are

not to be reliably demonstrated in the retina or optic nerve disk, it is somewhat different with some of the chronic conditions. We find these to involve, more or less, interference with the lymphatic rather than the arterio-venous circulation. Of course the latter must participate; but from the experiments of Wadsworth and Putnam (21), and others, in obstructing the circulation of the jugular veins, it plays quite a subordinate rôle.

The investigators before mentioned, who have studied the finer capillary circulation of the nerve, have also taught us the peculiarities of its lymphatic circulation, though His had described the perivascular canals of the retinal vessels some time before. In ordinary dissections of the optic nerve we find a space called the inter-vaginal space, surrounding the nerve proper, enclosed between the neurilemma and the fibrous optic nerve sheath, and according to Schwalbe continuous with the arachnoid space inside the cranium. This space has been demonstrated by Schwalbe to be really composed of two quite distinct cavities, which he named the sub-arachnoid and sub-dural spaces respectively. The latter is very narrow, capillary in size at the anterior portion, and only to be detected by injecting the sub-dural space of the brain under constant pressure. The sheath thus demonstrated separating these two cavities corresponds to the arachnoid membrane of the brain. The optic nerve tissue proper is thus enclosed within a triple sheath, an external, firm, fibrous layer, continuous with the dura mater, the dural sheath; then a very thin membrane closely attached to this anteriorly, but still capable of being lifted off from it as above, the arachnoid sheath; within this again, next to the nerve, and sending processes into the nerve to surround the individual fasciculi, the pial sheath or neurilemma, and Axel Key and Retzius (22) have shown that the neurilemma, not only of the whole nerve but of the finer fasciculi, is permeated with fine, lymphatic spaces. Injections made underneath the neurilemma fill these spaces circularly around each fasciculus of fibres.

Now avoiding intentionally all discussion as to the differential diagnosis between the so-called choked disk and optic neuritis, and of their respective pathological significations of the importance of making ophthalmoscopic examinations for the purpose of eliminating these diseases from the question of diagnosis in any given case as Hughlings Jackson (23) has so well shown to be necessary, as being foreign to the immediate subject under discussion, which is, not to describe all the ophthalmoscope will show, but to indicate

its limitations, I submit that, *first*, the appearances of optic neuritis, including in that term the choked disk in its various degrees and stages, are found in too many diseases both intra—and extra—ocular, local and general, to be of reliable diagnostic value taken alone with regard to extra ocular disease, and *second*, that these actual diseases are quite different from the conditions found in the various forms of insanity classified as melancholia mania, acute or chronic, dementia, imbecility, or even epilepsy, in most of which we have been quite unable to demonstrate any characteristic pathological condition even in the brain tissue itself; how improbable then to expect to find such capable of recognition in so distant an organ as the eye.

Dr. H. D. Noyes (24) of New York, at the request of Dr. Grey, of Utica, examined ophthalmoscopically in 1872 sixty patients from the wards of the insane asylum there. The examination was made without knowledge of the mental or nervous conditions of the patients, and consequently without prejudice as to the ophthalmoscopic appearances to be found. In none of them, with one possible exception (to be referred to immediately), was there any appearance characteristic of the individual disease. The same appearances were presented under the ophthalmoscope whether the patient had dementia, chronic mania, melancholia, or other of the various alienist classifications. Dr. E. G. Loring of New York made a similar examination of the patients at the hospital for epileptics and paralytics on Blackwell's Island. In his verbal report to the New York Ophthalmological Society, he stated essentially the same thing as Dr. Noyes stated for his sixty insane patients at Utica. The one exception in both cases was in general paresis of the insane. And yet when we compare their statements of the appearances presented in this disease with those of the so-called cerebroscopists, it is as difficult as before to reconcile them. Dr. Noyes examined eleven cases. In all of these, with the exception of two, there was "hyperemia and infiltration of the nerve and retina. The striation of the retina near the nerve is often extremely pronounced and may render the edge of the nerve hazy or indistinct. The nerve is often opaque in texture, and may be of a slaty hue. In one instance, the nerve is found pallid, and doubt is expressed whether this may not correctly be called a sign of atrophy. It would not be easy to decide this point without testing the sharpness of sight, which was not done." Compare now these cautious hints

of a skilled and scientific ophthalmologist, with such loose statements as that of Dr. Hammond (25). "The senses with the exception of sight, do not often become materially affected. Atrophy of the optic nerve causes amaurosis or amblyopia. Ophthalmoscopic examination will very generally detect this condition of the papilla at a very early stage of the disease, together with retinal and choroidal anæmia." Or that of Allbutt (page 193). It is a very remarkable fact that in almost all cases of general paralysis there is a tendency to atrophy of the optic nerve. The change seems sometimes to be one of simple atrophy quite from the beginning. In other cases and perhaps more commonly, the white changes are preceded by a state of redness, and the whole process then resembles some cases of tobacco amaurosis. The degenerative process begins about the end of the first stage, or the beginning of the second, and not infrequently results in complete amaurosis. When one takes the trouble to look over his tables, he will constantly find descriptions simply of "too white," "nutrition of nerves decidedly impaired," "marked atrophy invading the outer edge" (!) "disk pink," "edges unseen" (?) "disk seems a little redder than natural," "there may be a little atrophic tendency about some parts of the disk." Now I insist that these descriptions are absolutely worthless from indefiniteness, unless an examination of the eye had previously been made, and its physiological appearances established.

No ophthalmoscopist who wishes his reputation to be held as of value, will presume to state positively upon a given case that it is atrophy, without knowing accurately the conditions of vision. One may suspect that the patient has a defect of vision from the appearance of the nerve; but no ophthalmologist will positively assert that he has either incipient or perhaps absolute atrophy of the optic nerve, without having tested the limitations of the visual field, and color-perception, as well as central sharpness of vision. It is true, Dr. Noyes says further, "The uniformity in the aspect of the fundus oculi was so considerable that I soon learned to suspect from the ophthalmoscopic appearances what was the nature of the patient's malady." But he further says: "I am not to be understood as saying that I could thus diagnose general paresis." Dr. Loring stated that he learned after a time to pick out the cases of general paresis by a peculiar form of neuro-retinitis. He did not speak of any characteristic atrophy, Now these are statements of gentlemen having extraordinary

opportunities for investigating ocular disease. Both of them attached to the largest eye hospital but one in the world. They are accustomed to examine ophthalmoscopically many thousand eyes each year. When they express themselves thus cautiously, is it not wise for those having a less extensive field for observation to be equally modest in their assertions?

That ocular disease is frequently associated with intra-cranial disease no one pretends to deny. We have it at one stage perhaps as an optic neuritis, and later as an atrophy following or associated with various diseases of the brain, of which may be mentioned tumors, hemorrhage, cerebral abscess, hydrocephalus internus, softening; we have optic neuritis at the disk in intra-orbital tumors, cellulitis of orbit, deformities of skull, causing pressure at the optic foramen, and retro-bulbar optic neuritis. Also in scarlet-fever, typhoid-fevers, pneumonia, measles, puerperal-fever, alcoholisms, plumbism. *We have, as well, all these diseases without participation of the optic nerve.* The appearances of the optic nerve are not to be demonstrated ophthalmoscopically as essentially different in these different diseases, and are therefore unreliable as a means of diagnosis of the intra-cranial lesion. The differential diagnosis of the intra-cranial disease is to be made up from the concurrent brain or nervous symptoms, not by the presence of ophthalmoscopic appearances which bear no constant relation to any particular intra-cranial condition.

There may be atrophy of the optic nerve disk, a true papillary atrophy, following the inflammation of the nerve tract, without, so far as is known, any participation of the nervous center. There may be atrophy in disseminated sclerosis. It sometimes comes on as the result, as before stated, of tumors or of hemorrhages inside the cranium. We have it also in injuries by which the functional integrity of the nerve is cut off, but in no one of these are there diagnostic differences detectible under the ophthalmoscope. And when Allbutt says, in general paresis "that the atrophy of the optic nerve does not travel down from the optic centers and along the tracts, but exists as an independent patch of sclerosis does he not therein show the accidental nature of their connection?"

That the instrument is of great value in the study and examination of nervous disease, no one is more conscious than I am. But its usefulness is rather in the way of eliminating certain definite conditions; not in asserting the presence of a condition

which indicates any positive or characteristic brain lesion. Like the microscope it is simply an aid to investigation. The brain is the organ of the mind. The eye is the organ of sight. If the brain is diseased, it shows itself in some aberration of mental phenomena. When the optic nerve is diseased, the phenomena there are those of interference with the vision. Much more can be determined of the pathological condition by accurately investigating the finer details of interferences which the visual function as shown in limitations, central or peripheral, symmetrical or asymmetrical, binocular or monocular, transient or permanent of the visual field; the alterations of the color perceptions, etc., than in looking at the nerve with the ophthalmoscope. The subjective retinal sensations, or want of sensation of the individual affected are immeasurably more accurate than anything that the ophthalmoscopist can determine objectively. In a certain number of cases the two diseases go together; but there is no condition of either organ which indicates necessarily a definite affection of the other.

It seems strange that the advocates of so called cerebroscopy should be found not among ophthalmologists who are studying diseases of the eye in all phases, nor yet among the greater number of those who make diseases of the nervous system a specialty, to both of whom it would be of great value, to the former by enlarging their opportunities of practice, to the latter by adding an agent to their means of diagnosis, or treatment, or prognosis, but instead be confined rather to a very limited number of enthusiasts, who claim to be able to see more than those who are much more familiar with the instrument. If there were anything positive in the study of cerebroscopy, the great number of physicians engaged in the study of mental and nervous diseases would certainly have brought it to much greater perfection than has yet been done. In order to expect us to accept their views the cerebroscopists must use some other argument than to present to us appearances with which we are perfectly familiar, in ocular disease or of no disease at all, and claim them as evidences of brain disease. They must establish a much more constant and characteristic connection than they yet have done, and eliminate the question of coincidence pure and simple.

That insanity, a functional manifestation of disease in the brain, could be detected by appearances in another organ whose sole function is that of vision, would seem to be too illogical to be

more than mentioned, to be denied. If the optic nerve is diseased, its manifestation is in interference with the organ of vision and only that. No one is justified in saying, that because a man is blind from atrophy of the optic nerve, that he therefore has a disease of his brain, and there is very little differentiation to be made between the different forms of atrophy when confirmed. If he has disease of his brain, it is simply a coincidence. Few persons with diseases of the brain, nor indeed but a small proportion of them have any defect of their vision. Where blind persons have diseases affecting the nervous system in general, the blindness is because there is in addition, an especial and local affection of the retina or optic nerve; but this especial or local affection does not establish the general disease as fatty degeneration, nor varicose hypertrophy of the retinal fibres indicate Bright's disease of the kidney.

It is pertinent here to refer to a discussion in the New York County Medical Society (26) a few weeks ago, in which several of the prominent ophthalmologists of that city took part, and in which the unreliability of ophthalmoscopic appearances in determining cerebral disease was insisted upon by all. Dr. C. R. Agnew said, "That we might by looking into the eye with an ophthalmoscope tell whether the brain was congested or not, he did not believe as a rule, was true." Dr. C. S. Bull said, "The diagnosis of the inflammatory conditions of the optic nerve, and inferentially, corresponding conditions of the brain, had been for most part made by persons who were not sufficiently acquainted with the instrument to diagnose any of the more delicate affections of the eye. He thought it important that the general practitioner should know how limited the ophthalmoscope was as a cerebroscope." Dr. O. D. Pomeroy said, "The only method by which the eye could be examined exhaustively was the upright, and that could not be practiced skillfully without understanding how to diagnose refractions. No man could make a thorough ophthalmoscopic examinations without such ability, and he knew of no one who possessed the requirement except ophthalmoscopic surgeons. Ordinarily, neurologists were unable to state whether or not there was any disease in the eye."

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ESSAY.

THE INSANE DIATHESIS.

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The *ideal* human system would be one of perfection; that is, it would be one so constituted as to discharge all of its natural functions perfectly. Its capacities would however be limited as they now are, though not to the same extent. Digestion of such articles of food as the system requires would be perfect, though this might not be true as to many other articles which are appropriate for food for other animals. Sight and hearing would be perfect, but only within certain ranges and distances; memory would be perfect in reference to everything comprehended and understood. The limitations would be dependent upon the inherent nature of the organism, in its relation to its environment. What is stated above would be true of the functions of all inherent faculties of the human system, both physical and psychical.

The *actual* human system tends, in a greater or less degree, towards this ideal one. It possesses all the faculties, both physical and psychical, but they are tainted with imperfections which vary from the highest state of health attainable down to some assumed standard, below which we say diseased or pathological conditions exist. It will, however, be observed, and hereafter more definitely appear, that this border-land is merely one of assumption. Imperfection, which means disease, exists in every one. It matters not whether we put it in the form used in the old catechism, "In Adam's fall, we sinned all," or whether we commence on the Darwinian theory and work up. The point reached is the same on either road. In the latter case we are actually far from the ideal standard, while in the former we are not yet wholly diseased.

But the *actual* condition is one of changing stability, even with the most robust. It is not, however, my purpose to discuss this point, except so far as pertains to the psychical element, and I therefore do not refer to illustrations of its truth among the purely physical functions.

We do not know certainly upon what conditions of the brain sound, healthy mentality depends; we cannot lift the veil and look in upon cerebration; we cannot hear its vibratory movements; but there can be no doubt that certain prerequisite conditions are necessary. For instance, there must be a requisite amount of blood passing through the blood-vessels of the brain; there must be such a condition of these blood vessels in arrangement of distribution, and character of their coats, as to favor free exosmosis and endosmosis in all portions of the cerebral hemispheres. The nerve cells of the brain must possess at least a certain standard of both delicacy and strength in their constitution, and the same is true of both the connective tissue and the whole of the sensory portion of the nervous system. These conditions given, with possibly others the nature of which we do not fully understand, and we may, with reason, expect that those manifestations of mind which we term normal will be present.

But I desire especially to call attention to the fact, that even in what are termed normal mental manifestations there exists a very broad diversity of character. While some apprehend anything a little abstruse with great difficulty, or fail to do so at all, others understand it with a readiness which we are accustomed to call intuition. While many occurrences seem merely to impinge upon and glance off the minds of some persons never to be remembered again, they pass from the minds of others only after long years, or remain through life.

Some persons always look upon and judge of occurrences and events in an unusual way. They are odd or singular in their mental constitution, and are accustomed to do odd and out-of-the-way things, just as naturally as others would do the same things in such a manner as to attract no attention. Some persons hear, see, taste, touch, and smell so much more quickly and delicately than others, that we must conclude there exists a radical difference in the perfection of the organization of the nerve cells of these various organs of special sense.

Again, there are periods during which *all* persons see, hear, touch, taste, and smell with much greater readiness and delicacy

than at other times, even in a state of so-called health. Musical sounds are much more delicate and pleasing; harsh and rough sounds are more harsh and rough; certain articles of food produce a keener sense of relish, and colors a greater sense of pleasure: all of which would indicate temporary changes in the condition or function of the nerve element composing these special organs of sense.

The same is true to even a larger extent of the emotional nature. Persons are pleased in certain states of the nervous system with sensations, objects, and persons, which afford them no pleasure at other times; they are displeased and pained, while in other conditions, with sentiments which would at other times produce no such effects. They sometimes feel that the world and its possessions and pleasures are so great and grand that they can never leave them, and the thought of doing so causes the keenest anguish, while in another state all these pleasures and possessions appear as empty and valueless as a bubble of air, while the thought of leaving them, and throwing off the burdens and cares of life, which are usually so much enjoyed, seems almost pleasurable.

Again, persons have periods of being irritable, restless, nervous; they cannot bear much; little incidents which, in other conditions of the nervous system they would think little or nothing of, turn them into a passion of excitement, which can hardly be controlled for the time being. In other states they may long to weep, or to be in solitude where they can neither see nor hear anything; or they may shout, and laugh, and talk, while thoughts come coursing through the brain so fast that words fail to express them. The same changes occur among the impulses; these are at times almost irresistible. Nearly every one, while standing on a high cliff or house-top, has had an impulse to jump off or push his friend off, reckless of all consequences, and while on a bridge or in a boat, to jump into the water.

In the usual conditions of the nervous system persons love their children and relatives, and are ready to do and suffer, and at times even to die for them, if need be, while at other times all these sentiments fade away, so that they are unconscious of them, and even the opposite sentiment of dislike or hatred takes their places.

Periods of mental lethargy come over most persons at times, so that they care neither to talk nor engage in any of their usual intellectual or physical pursuits; and such stimuli as are usually

sufficient to rouse to action the brain appear to have very little effect. Persons say and feel that there is a state of only partial brain activity. At other times the brain acts with the greatest freedom; occurrences which took place long years before, and which perhaps have not been thought of since, come back with all the freshness of yesterday. Thoughts come rapidly—more so than words to express them. Keen flashes of wit, bright scintillations of thought, forms of expression of unusual felicity pour forth spontaneously, while the mind apprehends and retains many kinds of knowledge with the greatest readiness. Similar variations take place in reference to courage and its opposite, timidity, truthfulness and suspicion, and in fact the whole range of mental endowments.

Now all this grand play of diverse emotions and conditions in the psychical functions takes place in a state of health; still there can be no doubt that it comes from changes produced in some manner in the varied and delicate structure of the brain. It may come from the changes which are constantly taking place in the blood, in the processes of reception and elimination, or from those delicate chemical operations which must be forever going on in the nerve elements of the brain hemispheres, affecting their recipient and sensitive capacities, or it may be from other unknown causes.

Now we have only to suppose a person with a nervous system so constituted that these conditions, which I have described as temporarily occurring with most persons, are permanent, though in a latent state, and we have that peculiar organization which is termed the Insane Diathesis. That is, we have a nervous system so illy adjusted with its environment that when brought in contact with its exciting influences there occur abnormal instead of normal results, and these become more or less continuous, instead of evanescent. The husband hates his wife and the wife her husband; the parent his child and the child his parent. We have the person whose daily condition is such that he feels no pleasure and experiences no satisfaction in life, but hates it, and longs to throw off its burdens and cares, and leaves no effort untried to accomplish it; while another is so filled with joyous emotion, his brain so excited in functional activity, that he can neither eat nor sleep, but ideas flow forth in one constant stream of words—words; bright visions appear on every side, and his life is worth a thousand worlds. Or we may have any other of the ten thousand perverted mental activities which attend the “mind diseased.”

“And he, (a short tale to make)
 Fell into a sadness; then into a fast;
 Thence into a watch; thence into a weakness;
 Thence into a lightness; and by this declination
 Into the madness whereon now he raves,
 And all we mourn for.”

I have thus endeavored to trace out in a hurried manner and explain what is meant by the insane diathesis, and how insensibly it borders upon healthy conditions. In the above view there does not appear to be any well-defined, sharply-bounded line between what is termed normal and abnormal mental activity. The one insensibly merges into the other, while both depend upon the condition of the brain for the time being. When the brain is in what is termed a healthy, normal condition, then we have healthy mind, and *vice versa*. When it may vary ever so little from this state, either by inheritance or acquirement, then we have for the time being abnormal mind. Thousands are born into the world with brains so constructed, and thousands more attain to such conditions by the frictions of life and abuse of its conditions and enjoyments.

I wish now to trace out briefly some of the influences in operation in modern life, more especially in the education of the young and their habits of life, which tend to render the functional activity of the brain unstable and liable to abnormal manifestations.

The higher conception of an education would embrace the idea of its being *symmetrical*, that is, that the psychical and the physical should be in harmony. The system should be considered and treated as a whole. The brain should not be stimulated or cultivated at the expense of the body, nor should it be neglected while the latter is developed. If both are in harmony, then both, and especially the brain, will be in the best condition to withstand the strain and wear and tear of after life. But who thinks now of educating or developing the body of a child as a part of education? This, in the vast majority of cases, is left to take care of itself, while all thought of education centers upon mind. At five or six years of age, and while for some years the system must be in the formative, growing period of its existence, the child is confined five hours a day on a hard seat or chair, in a room often illy ventilated and irregularly heated. During the larger portion of this time he or she is expected to have the mind occupied in study, or recitation, which is quite equivalent to study. In addition to this, after the child arrives at the age of twelve or fourteen

years, tasks of such extent are imposed that it becomes necessary to study from one to two hours during the evening. I think that most persons with much experience in intellectual occupations will agree with me in saying that six hours a day is quite enough for an adult mind to be occupied, with advantage, in study. I think it will be found that our most successful clergymen and lawyers, and litterateurs, though at times a more protracted period of effort may be necessary, yet, as a rule, do not spend a longer time in intellectual effort. Yet, in the education of our little ones, we find that both teachers and parents, in their blind ambition to hurry them forward, conspire together in imposing tasks of such a character as to require longer hours than we know to be wise for the adult brain.

I believe, however, that the largest mischief does not come from the length of time occupied in confinement and study, great as this may be. A still larger defect in the system lies in the multiplicity of the subjects studied, and the lack of sufficient individuality in its administration. In our graded schools, pupils are parceled out in numbers ranging from forty to sixty in number in one room, and put under the charge of one teacher. I venture to say that no one teacher can do even half justice to any such number of children. The whole system is a purely mechanical one; all must come in, go out, rise up and sit down, study and recite, together. There is no room or time for individuality in any department of study. Each one goes on with the whole or he drops out and back, while the half-exhausted teacher has no time or opportunity to bestow the little aid which would often be of much value. His task is to know that in some way or other the pupil seems to know the lesson, and if he does not he must work until he does, or drop back. Now doubtless one or two out of every five of these fifty or sixty can press on with ease and health through all the studies which all are expected to master, but for the other three or four out of the five there exists a large tendency toward confusion and imperfect knowledge, rather than vigor and strength of brain.

In this respect I believe the education of fifty years ago was better than that of to-day. The teacher had a less number of scholars, while a few subjects were thoroughly mastered. A few books only were read, but what was studied and read was generally more thoroughly studied and understood. There were fewer confused and half-understood lessons and theories, and as the mind became older it went out for larger fields and broader pastures of knowl-

edge. They doubtless did not have much information as to the movements of the heavenly bodies, or of the names of insignificant towns, hamlets, or rivers on the eastern or western coast of Africa. They might not be able to define the boundaries of Kamschatska, nor give the pluperfect of a large number of irregular verbs; but on the other hand their brains were clear and vigorous, and possessed a recipient capacity. They were not crammed and confused by dim memories of a vast multitude of names or facts, which could by no possibility have any important bearing on their future lives or fortunes. Knowledge to be of much practical value in life must be clear and definite in the mind of its possessor. When half mastered it tends rather to weaken and confuse than strengthen and invigorate; and therefore, during the earlier periods of life, study in our schools should be confined to a comparatively few subjects. Please bear in mind that the grand object in education, physiologically considered, is to render the brain strong, vigorous, and stable, and as little liable to instability and uncertain and irregular action as possible. Any course of training, therefore, during this early formative period of life, which tends to crowd the mind or stimulate it to over-activity, must tend to after weakness and instability.

This leads me to protest against the modern tendency to continually increase the requirements for entering and continuing in our graded schools and colleges; while the number of studies is increased the time for their acquisition must remain unchanged, and each scholar is hurried on through or dropped by the way. To avoid the latter result too great and too protracted effort is necessary on the part of many children, while in some cases the results are manifested in a state of mental confusion and uncertainty, and a nervous, hysterical condition.

I have in mind, at this writing, a case which will illustrate my point. It was that of a young lady of ordinary mental endowments, whose parents usually brought her to me for advice as often as every two or three weeks, because she was nervous and suffered with frequent and protracted headaches, especially near her monthly periods. Inquiry elicited the fact that she was obliged to study during the evening until ten or eleven o'clock to accomplish the tasks which were assigned to her class, and it was thought by the parents that this practice was all right; that it evinced faithfulness and ambition on the part of the young lady, which was undoubtedly true; and it was with great difficulty that I could

convince either her or her parents that her condition was due to the constant violation of the laws of health; that her brain and whole nervous system required longer periods of repose and quiet at her age than it would be likely to need later; that the future of her whole life, as a member of society, might, and must, in a large degree depend, not on the grade of the marks she might receive in her daily recitations, but largely on the nervous and physical strength she might be able to build up before she should become twenty-one years of age. This young lady was of a healthy parentage and inherited a good physique, and with proper habits of life and study would have had excellent health. As it was, her system will not for years, if ever, recover from the effects of her habits of excessive hours of study.

The name of another patient occurs to me, a young man of good parentage and apparently inheriting a good constitution. He was ambitious in study, and his parents allowed him to do all might choose to. He entered college, standing among the best scholars of his class, but, before the end of his first year, began to be troubled with noises in his head and confusion of mind. He was removed from college, and remained out till the end of the year, but partially kept up his studies at home. He entered the sophomore year, but was obliged to leave earlier in the year than before. He tried the junior year with a like result, and from this time began to show more decided indications of mental impairment. He traveled both in this country and in Europe; he consulted the most eminent physicians, but all to no purpose: the mischief had been too effectually accomplished. The delicate tissues of the brain had been over-strained, and so impaired that when his parents awoke to its importance it was too late to repair the mischief.

Multitudes of similar cases could be cited if it was necessary. Another young man, barely graduated, standing in the front rank in his class, and then for years was able to do but little study, and spent his time in a vain search for that health which by judicious habits in study he would never have lost.

I desire, however, not only to emphasize the effects of study so far as they may manifest themselves on the individuals themselves, but the effects which they are certain to transmit to their posterity. The brain may, and does in many cases, so far recover that it may fairly do the work, or *a* work in life, but it has attained a bias—a twist, which will be sure to manifest itself in the next generation in something more than a twist; it will be an insane diathe-

sis—a brain constituted in so unstable a manner that the friction of ordinary life will upset it, ending in insanity.

I have often thought that teachers are only partially to blame, as they are countenanced and encouraged by the parents in this injudicious course of mental stimulation in early life. Perhaps the very freedom of our educational and governmental institutions also helps it on: every child is taught that all the prizes of life are within his grasp, if he will only make the requisite effort, while every parent longs to see his child higher up in the social scale than he himself is. These conditions not unfrequently serve to stimulate those especially ambitious to over-exertion, while again, there is less of the controlling element, both in home and social life, than exists under most other forms of government. Education should embrace the learning self-control, and self-denial even, for individual or the general good, and when this element is lost sight of, and the child is permitted to grow up having his own way in most things, and his every wish gratified, he has a large disadvantage when brought into contact with the friction of adult life. It has happened in my professional experience that I have seen not a few young men and women hopelessly stranded in life, whose early education had been one of extreme indulgence. They had never been controlled in home life, and when projected against the rough experiences of actual life were brought up with a round turn, or with no turn at all. The shocks were too much for them; they could not bend, and therefore broke. Obedience to law, whether it be parental, social, or civil, is one of the corner-stones, in fact the fundamental element, in any efficient and worthy system of education. While I would not go back to the strict system of a hundred years ago, wherein all individuality was lost, and everything was made to yield to the law element in society, yet I fear that, in the recoil from that system, we have been and still are in great danger of going too far in the other direction. Freedom of individual action and thought is in danger of degenerating into mere license, so that in too many quarters respect for parental, school, and civil authority is among the young considered as an indication of weakness and indecision.

Still, it is but just to say that we in America are not the only ones who need to plead guilty in reference to over stimulation and faulty education. An English physician, in referring to this subject, lays similar accusations against teachers and parents in that country. He says, "The master of a private school informs me

that he has proof of the ill effects of over-work, in the fact of boys being withdrawn from the keen competition of a public school career, which was proving injurious to their health, and sent to him, that they might, in the less ambitious atmosphere of a private school, pick up health and strength again. He refers to instances of boys who had been crammed and much pressed in order that they might enter a certain form, or gain a desired exhibition, having reached the goal successfully and then stagnated." He further says, "Too many hours daily study and the knowledge of an approaching examination, when the system is developing and requiring an abundance of good air and exercise, easily accounts for pale and worn looks, frequent headache, disturbed sleep, nightmare, and nervous fears. When the career of such students does not end in graduating in a lunatic asylum, they lose for years, possibly always, the elasticity and buoyancy of spirits essential to robust mental health. A strong constitution may be sacrificed to supposed educational necessities."

The above statements were made as showing a tendency, on the part of prevalent modes of education in England, to produce in its subjects either insanity or a tendency toward it. I here introduce them as showing how strongly such an influence is developed, which may, and in most cases does, fall short of actual disease, but which is of such a nature that it will tend to develop the insane diathesis in the next generation. Parents transmit acquired tendencies towards disease as well as, and indeed I think much more frequently than, disease itself.

I must beg, however, not to be misunderstood. I think I value the importance of an education for the development and discipline of the brain, as profoundly as any one. Indeed, I believe the lack of brain discipline, for those who are to compete in the struggle of life in the midst of such a civilization as that of to-day, is one of the greatest misfortunes; but I do desire to protest with all emphasis against this indiscriminate system of cramming, toward which the English-speaking people appear to be so rapidly tending. It tends to defeat one of the most important ends to be gained. Instead of rendering the brain stronger and more capable of vigorous work in life, and transmitting to another generation a sound, healthy mentality, there exists a probability that there will be transmitted, in too many cases, a tendency to unstable and irregular action, which will have a final ending in insanity. I wish to plead earnestly for a larger degree of *individuality* in our

system of education, even if it be at the expense of some diminution in other respects. Let there be fewer subjects studied, and let what is studied be more thoroughly mastered. Have fewer half-understood problems and half-remembered lessons, and I believe we shall have stronger intellects and more stable brains in after life.

There are certain other conditions which I think have an important influence toward increasing instability of brain action, to which I wish briefly to refer.

And first, the great change which has occurred during the period of the last generation (the much-glorified period of the telegraph and railroads), in the habits and customs of living among the older civilizations. Immensely fewer people till the soil and follow out-door occupations for a livelihood than thirty-five years ago, and the improved agricultural machinery is tending constantly to make this number still smaller. Larger numbers are congregated in factories and mills, and are engaged in mechanical occupations, counting-houses, mercantile, and in-door lives. Instead of being in the open air, every moment breathing it in its purity and freshness, they are, for twenty or more hours out of the twenty-four, either in the close and vitiated atmosphere of the factory or counting-house, or, what is not unfrequently worse, the illy-ventilated sleeping-room or parlor. In the one case the blood is purified and nourished by the influence of a large supply of pure oxygen which it bears to every portion of the system and especially the brain, while in the other it is only partially decarbonated and bears a taint during its whole round of circulation. Thousands and tens of thousands who, thirty-five years ago, in England, France, Switzerland, and this country, lived largely out of doors, whose cheeks were fanned with the fresh breezes from "early morn till dewy eve," to-day are immured in the dense atmosphere of cities and factories.

Again, there has, within the same period of time, come a large change over the human system itself, attributable in a measure, probably, to the above causes. There has been a change in the relative prominence of the circulatory and nervous systems in reference to disease, so that those which affect the former system to-day demand and receive a largely different mode of treatment from that used forty years ago: the heroic system of those days so freely resorted to would not be so well borne to-day. The force or tendency of disease seems to be carried over (if I may so speak)

into the nervous system, so that there is a much larger tendency toward disease of this system than before, while the keen competitions, the intense mental activities which pervade all the avocations of modern life, tend to still further increase it. There results—there can but result, on the whole, a much less robust and vigorous system, and also much less robust and vigorous families of children. While the number is largely diminished, those who are so fortunate, or unfortunate, as to complete the journey, arrive in the world to meet, it is to be feared, in many cases, with a cold reception, and bear in their nervous systems a weakness which clings to them through the journey of life.

Further, with such changed conditions, more especially among the English-speaking people of to-day, I can but believe that the effects of alcohol and tobacco, especially the former, are much more injurious upon the nervous system than they would be under the former modes and avocations of life. I have not time, or inclination if I had time, to descant upon the effects of alcohol upon the general system, but I desire to call attention simply to the fact that its primary effect is that of one of the active stimulants, both to the circulatory and nervous systems, and as such, when long and continuously used, must have a demoralizing effect upon these systems. While probably there is much less alcohol used among the more intelligent classes to-day than there was fifty years ago, we must bear in mind, first, that society to-day is reaping the harvest of its use fifty years ago in the form of a nervous system inclined to disease; and, second, that there is an increased use of it among the young, especially in all our large towns and cities. Let anyone pass through the principal streets and drinking saloons of any of our large towns and cities, during an evening from eight to eleven o'clock, and I think he will be astonished, unless already familiar with the state of the case, at the number of young men and boys from the age of sixteen years up to that of twenty-four he will find engaged in drinking beer or wines, and enveloped in the fumes of tobacco. Perhaps it is not wise to be extreme in our views in reference to the use of these articles. They may doubtless be used with moderation by adult persons for long periods without serious results in the way of actual disease, but when used from the ages of twelve to twenty-two, when the whole energy of the system should be occupied in its growth, I believe, from a somewhat extended observation, that their effect is immensely disastrous, and largely tends to create a nervous diathesis in after

life. An alternate stimulation and depression, while it must be unfavorable in its effects at any time of life, yet upon the young is vastly greater. We observe its effects upon the young of our domestic animals, and exercise the greatest care that they be not over-fed, over-driven, or over-worked while their systems are undeveloped and in the growing period. Where one is looking for the best growth, or the highest speed or strength attainable, if judicious, he will exercise the largest care and vigilance lest his animal be over-stimulated by food or work, and never permit its full strength to be tested until the system is developed and firmly knit together. How can an opposite course in reference to either education or habits of life, food, and drink, have any less serious effect upon the vastly more delicate tissues of the brains of young men and women? Besides, I believe the effects of alcohol upon the system are less injurious when the subject spends the larger portion of every day in the open air, and is engaged in the exercises of out-door occupations. It becomes sooner eliminated from the system, and acts as a less efficient stimulus.

If the above views in reference to education, the changes which have come over the habits and modes of modern living, and the effects of stimulants upon the young especially, be true, then it appears that there is a *mental* as well as a physical hygiene, and that similar laws may hold good in reference to both. Within a few years we have made wonderful advances in our knowledge of the latter, and by an investigation of the former it will appear that no more surely does typhoid or diphtheria, and kindred disease, follow in the track of neglect in reference to their causation, than does the insane diathesis follow from neglect to observe and avoid its causes. There is, however, this difference. In the one case effects are soon seen and in many cases easily traced to their cause, while in the other they only appear after a long time, and not unfrequently pass over into the next generation before appearance. Persons rarely become insane at once. The operative causes are long in incubating; they are generally insidious in their operation, so that months, if not years, may pass before the nervous system actually gives way in insanity. Hence the uncertainty and, oftentimes, mystery connected with the etiology of individual cases; we mark down long lists of *exciting* causes of insanity, and are too prone to forget that the *real* causes lie far back of these. These exciting causes may be equally operative in a dozen cases, and yet produce insanity in one only; and in that one because that some time in

the past the treatment of his nervous system, or that of his parents, has violated the laws of its health.

I trust I may be pardoned if I venture to suggest that we have given undue importance to the former class of causes, and too little to the latter. Thousands may suffer from these exciting causes, and never become insane, because the potentiality for the disease does not exist in the form of a nervous system rendered unstable in its constitution either by inheritance or acquirement.

Finally, I venture to suggest the importance of our responsibility in reference to the public health, *mental* as well as physical. While we have been active and vigilant in reference to the latter, and have won large victories, I greatly fear we have too much neglected the former. It is the general practitioner, rather than the specialist, who comes more often into contact with these insidious and generally unsuspected causes, so silently, and yet surely, operating to ruin the nervous system. He it is who must plead for wise and judicious courses of education and development of the young. He, more authoritatively than any one else, can point to the outcome of stimulation and excess of all kinds upon the nervous system in its formative period. He, more than others, must realize the unwisdom of delay until the mischief is done and disease has manifested itself. Insanity is rightly regarded as one of the greatest of calamities, in whatever light it may be viewed, so that no field of medicine offers a larger reward for every success which may be attained in it than the one under consideration. To the general practitioner this field lies open for occupancy, and on him rests the responsibility of its development.

ESSAY.

HEREDITARY TRANSMISSION OF SYPHILIS.

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The fact that syphilis may be transmitted by inheritance is now too well established to require demonstration. The vast amount of literature devoted to the discussion of the subject is sufficient indication of its importance. Acquired syphilis is recognized as a disease of the gravest importance—its transmission to offspring is its saddest result. In a large number of cases the infected embryo perishes—but unfortunately many children are born either presenting symptoms of the disease, or soon passing from apparent health into that melancholy condition. A definite understanding of the mode of transmission becomes of the highest practical importance in that it may lead to the discovery of measures that will at least materially modify the effects of the inherited disease. The peculiarity of syphilis as a chronic disease—preserving its contagious qualities for many years—has rendered the investigation into the mode of transmission unusually difficult, and it must be admitted that entirely satisfactory conclusions have not yet been attained. In a paper of this character I can only attempt to place before you in the briefest manner the opinions of the most trustworthy authorities, and at the same time state the evidence upon which such opinions are based.

We find two parties in the controversy—one ably represented by Kassowitz of Vienna, and Drs. Taylor and Bumstead in our own country, which claims the disease in children is a true inheritance, transmitted only at the time of conception, while the other party claims a two-fold inheritance, i. e., a transmission of the disease not only by means of the generative cells at the time of concep-

tion, but also through the utero-placental circulation from the mother to the child. In this party we naturally find also the advocates of a retro-infection from the fœtus to the mother. This claim for a two-fold inheritance is the source of nearly all the confusion now involving the subject.

Clinical experience establishes most conclusively the transmission of pathological tendencies at the time of the fecundation of the ovule. From this fact it follows that the vehicles for the transmission of such tendencies may be either the ovule of the mother or the spermatozoa of the father. Careful investigations to determine whether the influence of either parent predominated have clearly demonstrated that the peculiarities or diseases of the father are as frequently exhibited in children as are those of the mother. If we limit the power of transmission to the time of conception then the equality existing between the paternal and maternal influences is readily explained, otherwise we cannot explain why the mother's influence should not predominate. From this statement it is fair to assume that all hereditary diseases, syphilis excepted, are transmitted to offspring only at the time of conception. If we include syphilis, we find these conditions under which it may be transmitted by inheritance:

First, the father alone may be diseased.

Second, the mother alone may be diseased.

Third, both parents may be diseased. The whole question as to the possibility of inheritance in the more restricted sense of the word—excluding the possibility of a utero-placental infection—hinges upon the question involved in the first of these three conditions.

Can the mother of syphilitic children remain healthy?

If the question can be answered in the affirmative, then syphilitic inheritance in the narrower sense is proved. Proof can be established by clinical experience only, and from the nature of the disease the investigator rarely obtains the information demanded. Ignorance and willful concealment are probably encountered here more than any where else in medical investigation. To attain satisfactory conclusions it is essential that the condition of both parents at the time of conception should be known. The health of the mother must be further established by observations continued at frequent intervals for a long period subsequent to her confinement. A mere statement of her condition at the time of confinement is obviously insufficient to exclude the possible exist-

ence of constitutional syphilis. Finally, the syphilis of the child must be established by the presence of some characteristic lesion. Among the vast number of cases reported as illustrative of the hereditary transmission of syphilis, we find an extraordinary neglect of these three conditions, but in the monograph of Kassowitz we find the investigations in almost every instance carried out in a truly scientific spirit. His array of cases gathered from other authors is noteworthy—but his own cases are by far the most conclusive. I will quote briefly his results: “Of the 119 cases which I have recorded, in 43 the element of heredity was doubtful. In the remaining 76 cases, 43 of the mothers were unquestionably free from syphilis. In 23 cases, both of the parents were syphilitic, and in 10 cases the mother alone was suffering from the disease.” “Of the health of these women I convinced myself through observations carefully conducted and in most cases continued for many years.”* He states in detail the manner in which his observations were conducted, and exhibits therein a scientific accuracy that admits of no doubt as to the apparent health of these women. From the record of the Vienna Foundling Hospital, as quoted by Kassowitz, we learn that from the years 1854 to 1868 there were in that hospital 400 cases of hereditary syphilis. Of the mothers, 122 were syphilitic; the condition of 112 was not known, while 166 were pronounced sound so far as syphilis was concerned. Many cases are further reported as indirectly proving the health of these mothers. The mass of evidence collected upon this subject must be accepted as proof that a woman may give birth to a syphilitic child, and herself present no recognizable syphilitic lesions. The question still remains, Is the mother really or only apparently *free from Syphilis*? In answering this question we have to consider—First, the liability of the mother to transmit the disease to children by a healthy husband, and—Second, her liability to future infection.

There is abundant evidence to prove that a woman who has borne syphilitic children by a syphilitic husband may subsequently bear perfectly healthy children by a healthy husband. This circumstance alone would seem to establish the soundness of the mother, as far as liability to transmit the disease is concerned. The only objection that can be raised is founded upon the well-known tendency of syphilis to lose its intensity until women who have unquestionably been syphilitic are able to give birth to healthy

* Kassowitz—“Die Vererbung der Syphilis.”

children. In many cases children by a second husband might be sound by reason of this fact, but that it is not always so is clearly shown by a case reported by Richter. In this case a woman had given birth to a syphilitic child by a syphilitic man, then healthy children by a healthy man; subsequently she returned to her first husband and gave birth to syphilitic children. In this case the woman certainly had no power to transmit the disease to her children. The health of the mother is further established by the fact that syphilis in children can be eradicated by treatment of the father alone. It is by no means unusual to see syphilis in a family of children irregularly developed, owing to the irregular treatment of the father. A perfectly healthy child is often seen, where the children before and after it are syphilitic. The mother in this case seems to be absolutely free from any tendency to transmit the disease. It may be assumed that women may bear syphilitic children, and remain perfectly sound as far as liability to transmit the disease is concerned. In considering the liability of these women to future infection the evidence is less conclusive. The mother of a syphilitic child is exposed to infection either from her husband or from the lesions upon the child—the infectious quality of these lesions being admitted.

Cases are reported in which women, who ultimately gave birth to syphilitic children, have developed chancre as late as the ninth month of pregnancy. In such cases the syphilis of the child must have been inherited from the father, for certainly the mother could not transmit it through the utero-placental circulation until her own blood was thoroughly infected. These cases establish the immunity of the mother of a syphilitic child during the greater part of pregnancy. It is certainly fair to assume that she may remain sound until the birth of the child, for if there is any such thing as retro-infection it must in all probability occur prior to the seventh month. Syphilis contracted by a married woman, and followed by very slight constitutional symptoms, may easily escape detection. And it cannot be assumed that a mother of a syphilitic child cannot be infected subsequently to its birth simply from want of direct evidence. What evidence we have seems to indicate that such a woman may be infected. Can a mother be infected from lesions upon her child? I believe there is no reliable case in the literature of the subject that will give an affirmative answer to this question; several cases have been reported, but Kassowitz pronounces them unreliable, and adds, "I myself have

never been able to establish an infection of the mother at the breast by her own child suffering from inherited syphilis." In the new edition of Drs. Bumstead and Taylor we read, "this fact would seem to indicate that the escape of the mother is due to some occult, indiscernable change in her system." It must be admitted that this question is the stumbling-block for the advocates of an inheritance in the narrower sense exclusively. It is true that the question has not yet been satisfactorily answered—why a perfectly sound woman is not infected by her syphilitic child, when a nurse will be almost sure to be? Is it fair to argue from this single circumstance that the mother is syphilitic? Can anyone who does not present the slightest symptom of a disease be said to be suffering from it, simply by reason of an apparent exemption from its infectious qualities?

In the discussion of this question we find a claim for a modified form of syphilis, well described by Baumler.* "Women who go through a number of syphilitic pregnancies begin gradually to suffer an impairment of health without ever being infected in the ordinary way. A modified infection ensues, which lacks the primary local affection, together with the stages of eruptions and condylomata. Gradually increasing pallor and emaciation, alopecia, glandular enlargements, isolated bony nodes, gummata of the cellular tissue, or ulcers of the mucous membranes, or psoriasis palmaris, are the sole affections which these women present. Such women, Zeissl states, often complain of profuse menstruation or abort when they become pregnant. Hutchinson and others "claim that this contamination of the maternal organism is the result of a resorption of syphilitic embryonic fluid, the embryo owing its disease to the father." How can it be proved that this condition of the mother is due to a resorption of syphilitic embryonic fluid? Women may present many of the symptoms referred to and yet be absolutely free from syphilis. And even in the cases which point most convincingly to syphilis we certainly cannot assert fairly that there has never been chancre. This is evident when we consider the liability of chancre in women to be concealed from view, and its existence not even suspected by the woman herself. Many cases presenting the appearances described as indicating a modified syphilis have been under my own observation for several years. The lesions upon the children have presented unquestion-

able evidence of syphilitic origin. The indirect evidence has led me to the belief in all these cases that the mother has actually been infected by her husband, and is presenting a mild but not a modified form of syphilis. I certainly know no evidence in these cases that would justify my saying that these woman had not been infected in the usual way.

The observations of Kassowitz and many others, proving conclusively that women may bear syphilitic children, and remain free from all evidence of the disease, the fact that such women do not transmit the disease in the future, and that they are themselves susceptible, for a time at least, to its infectious qualities, would seem to establish an inheritance from the father alone. Prof. Weil,* of Heidelberg, says, if the answer to the question whether a woman may bear syphilitic children and remain healthy herself is in the affirmative, "then, not only is the inheritance on the side of the father directly proved, but the inheritance from the mother, which can never be directly proved, is rendered more than probable: for the analogy of the diseases which can be transmitted by inheritance to offspring (Phthisis-Hæmophilia, Gout, Insanity,) teaches us in the most unmistakable manner that, in reference to the transmissions of pathological tendencies, fathers and mothers are just as much on an equal footing as they are in reference to the transmission of physiological peculiarities."

Granted that syphilis can be transmitted by the father or mother alone, it needs no demonstration to prove the possibility of an inheritance when both parents are diseased.

Inheritance in the narrower sense is admitted by nearly all authorities. Of utero-infection I have already spoken in discussing the health of the mother.

We come now to the question. Can the mother infect the fœtus through the utero-placental circulation? At the present time most authors admit the possibility of a utero-placental transmission of syphilis to the fœtus. A large majority in the profession seem to have an indefinite belief in this mode of infection. In reading the works of its advocates we nevertheless observe a contradiction which is exceedingly suggestive. The transmission of the disease, it is claimed by some authors, occurs during the early part of pregnancy—by others it is confined to the last months—while again it is stated by some that it may occur at any time prior to the birth of the child. These contradictory statements, from writers advo-

* British Obstet. Journal, Vol. VI., No. XII.

cating the same theory, certainly indicate a lack of satisfactory evidence to sustain their claims.

Many cases are reported as establishing an utero-placental infection, but I have not found one that cannot be fairly explained, independent of this theory, or is not so unsatisfactory from neglect of scientific accuracy as to be of no value whatever. Women are reported as having contracted syphilis—and then aborting or giving birth to a syphilitic child. In these cases we find no statement of the condition of the father at the time of conception—and obviously we cannot accept the infection of the child through the mother's blood until this point has been determined.

As to abortion, I have already said that in itself it did not prove the fœtus to have been infected. Examinations of the fœtus after abortions of this character have been frequently made and have proved that in many instances the fœtus was not infected.

Children who are born syphilitic—when the health of the mothers at the time of conception has been established by a subsequent development of chancre, owe their disease to the father. That this is true in cases where the mothers remain sound is admitted, and it is for the advocates of a transmission of the disease through the utero-placental circulation to prove by clinical reports that it is not always so. This they have not as yet been able to do. As evidence against the transmission of syphilis through the blood from the mother to the fœtus we find several cases which prove that if both parents are infected at any time subsequent to conception the child may be born healthy. I quote one case as illustrating this fact. "A man infected his wife about the middle of her first pregnancy—while he himself was being treated for chancre. The syphilis of the wife was apparent during her confinement. The child was born sound and remained so notwithstanding it was nursed by the syphilitic mother. In the next pregnancy, in spite of mercurial treatment, the mother aborted at the fourth month. The next time at the seventh month. The fourth child was carried the full time, but died when it was three months old with symptoms of syphilis. The fifth child also had syphilis, but was cured with the protiodide of mercury; finally, a sixth and seventh child were born entirely sound!" Here we have all the conditions fulfilled. Both parents were infected after conception. The child was born free from all symptoms of syphilis, and remained so, while the five pregnancies following the one during which infection occurred were influenced by the disease. The escape of the first

child in this case could hardly be possible if the disease could be transmitted through the utero-placental circulation, for the mother, during this pregnancy, presented early constitutional symptoms, and was more liable to transmit the disease than at any later period.

Another fact which seems to disprove this mode of transmission of syphilis is the birth of twins—one presenting aggravated syphilitic lesions, while the other may be only slightly affected, or even perfectly sound. If we admit the possibility of a transmission of the disease through the utero-placental circulation it is certainly inconceivable how a disease of the character of syphilis could be transmitted to one fœtus only. But if we restrict the transmission of syphilis to the time of conception then the difficulty is readily explained by assuming that at that time syphilis was developed in the germinating cells in different degrees of intensity, and in some was wholly absent. This assumption is certainly not unscientific, for it accords with our experience in all diseases transmitted by inheritance. In such diseases we observe apparent periods of latency during which the disease is not transmitted to children. The child of a woman suffering from phthisis may inherit the disease; that it must inherit the disease is disproved by the daily experience of every one in the medical profession. We see these periods of apparent latency even in syphilis. It is by no means uncommon to see a perfectly healthy child in a family where all the other children born before or after it are syphilitic. If this explanation of the difference in the development of twins is not accepted, then how is it to be explained? If the transmission through the placental circulation is admitted, how is it possible that two fœtuses developed at the same time, nourished by the same blood, and in every way similarly exposed to infection, should be differently affected?

There are certainly no clinical facts sufficient to establish a utero-placental transmission of syphilis; on the contrary we find many cases which disprove it. Drs. Bumstead and Taylor say, "The experiments of Pellazari have conclusively proved that the essential vehicles of the specific virus are cells or albuminoid molecules derived from an active syphilitic lesion. After fecundation the embryo is not supplied with cells of any kind, but simply with serum. There is, therefore, after the occurrence of conception, no possibility of the transmission of syphilis." If this statement can be accepted then the whole question of utero-pla-

cental infection is settled; but we have the unquestionable fact that some of the infectious diseases are transmitted to the fœtus in utero in some manner which we do not yet understand. It is certain that variola may be transmitted to the fœtus, but, while the possibility of such a transmission is admitted, it is distinctly stated that it very rarely occurs. The same is true of all infectious diseases which are transmitted to the fœtus. Curschmann,* in speaking of this transmission of variola, says, "were the blood of the mother the principal infecting agent the disease of the fœtus would be of decidedly more frequent if not constant occurrence." It thus appears that in pregnant women who are suffering from variola the transmission of the disease to the fœtus is an event of such rarity as to render the infection through the placental circulation extremely doubtful; other ways have been sought to explain this transmission of an acute infectious disease to the fœtus, but a discussion of the question would be out of place here. I mention the fact to show that in an acute infectious disease, where infection of the fœtus must have come from the mother, it has been necessary to look for some source of infection outside of the utero-placental circulation. From what has been said it is fair to draw two conclusions:

First. The hereditary transmission of syphilis occurs at the time of conception. Second. There is no evidence to establish a transmission of the disease through the utero-placental circulation. This is, however, still an open question. The further discussion of this question, and also the question of the transmission of syphilis to the third generation, must be left. The practical importance of a thorough understanding of the transmission of syphilis to offspring can hardly be overestimated. If it is accepted as a disease transmitted only at the time of the fecundation of the ovule, then it is more under our control than any other hereditary disease. An examination of the results of treatment of both parents prior to conception, and of the mother during gestation, shows conclusively that we possess a certain control over the disease that will modify, and in many instances eradicate, it in the second generation. It is not to be expected that patients will always tell the truth. If the physician waits until he has a confession of syphilis from both parents he will rarely make a diagnosis. In private practice the father will conceal, while the mother may be wholly ignorant of, the true nature of the case. But nature offers to us indications

* "Venereal Diseases," Bumstead and Taylor, 1880. "Ziemssen Cyclopedia," Vol. II.

that should not escape the notice of a careful physician. This form of syphilis is not as a usual occurrence under the care of specialists. Hereditary syphilis and syphilis in married women come under the care of the "family doctor." Hutchinson* truly says, "the power of recognizing syphilitic disease when brought under notice is one of the most valuable gifts the physician can possess. These diseases meet us at every turn of practice, and present a most bewildering variety of external aspect. The first requisite to success is a mind constantly awake to suspicion. This suspicion must be present whatever may be the position in life or the reputation of our patient" In closing let me say that we all have it in our power to do much towards averting the transmission of syphilis to children, if we will only keep under close observation the cases of syphilis that come under our care. Young unmarried men are too often treated merely to repress external manifestations of the disease. They marry in ignorance of the fact that a prior course of treatment would influence the development of their children. And they lose one child after another with the idea that there is no relief and that they are paying the penalty for boyish indiscretions. I do not claim that treatment would invariably prevent the transmission of syphilis, but in very many cases it can be controlled by the physician, if he will instruct his patient in the matter of hereditary transmission and the influence exerted upon it by treatment. If every physician would make this a study he would not only relieve distress and disappointment in the parents, but he would do much towards bringing into the world a healthier set of children.

* "Reynold's System of Medicine."

ESSAY.

A NOTABLE DEFECT IN MEDICAL EDUCATION.

BY D. A. CLEVELAND, M.D.

In our researches and close investigation of the nature, diagnosis, treatment, and prevention of the various diseases coming under the observation of the physician, insanity alone has been and is now regarded as outside the pale of legitimate inquiry and diligent study by the general practitioner; and there seems to be a common agreement among general practitioners, when a person's mind loses its equipoise, to at once turn that person over to the specialist in that particular form of disease, and confine him in an asylum, not stopping to study the malady, to learn the particular type or form of mania under which his patient is laboring, that he may know whether it be of a character to be best treated in a close-walled asylum, mixed with the common herd found in such places, or at the home, among friends and family attendants. This habit of shirking the responsibility, a habit preceded by the course pursued by generations of ancestral lights in the profession, gives a seeming warrant to the answer given by a learned and venerable member of our society, in reference to the advisability of a commission in lunacy. He says: "There are not three physicians in the State, outside of our asylums, competent to fulfil the duties appertaining to such an office;" and the great indifference to this subject shown by the general practitioner robs the expression of another member of our society of the suspicion of egotism, when he says, referring to such a commission, "that its members should at least be the peers of the superintendents;" leaving us to infer that he holds the opinion that such men cannot be found within the limits of our State. Whether the assertion of the

former or the implication of the latter be well-founded or not, and I claim that they are not in accordance with the facts, they serve to point to a notable defect in our medical education, and, if they have no other effect, should arouse us to a sense of our deficiency in the knowledge of mental diseases.

While an accurate knowledge of the physiology and pathology of each of the other organs of the human economy, and the functional relations of each to the other, is requisite to a correct understanding of the diseases to which they are liable, correct understanding of mental diseases involves a knowledge of cerebral physiology and pathology with the functional relations of the brain to the other organs, and there is nothing incident to the study of these diseases which places them beyond the possibility of being understood by the physician of ordinary capacity. But there seems to be a prevalent idea in the minds of many in the profession, as well as out of it, and I think this idea prevails with the majority of practitioners, that the specialist in insanity alone is capable of understanding mental diseases, and that there is some occult, mysterious condition, confined exclusively to the brain, which is beyond the mental reach of any but the specialist, or so-called alienist. It seems to be regarded as an entity which has no relation to any other part or organ, but is independent of them all for its existence, and that the specialist is endowed with some hidden and mysterious power, like that possessed by the Indian snake-charmer, or is born with a magical gift, like that claimed for the seventh son of a seventh son, by which he alone can successfully understand and treat these diseases. This fallacious idea, like all other fallacies, is the result of ignorance of the subject, and will continue to obtain in the minds of the profession until this branch is as fully taught in our medical schools as any other branch of medical science. But how is it to-day? While our young men are required to be thoroughly conversant with all the details of the nature, etiology, diagnosis, treatment, and means of prevention of the other diseases, they are not required or expected to know one thing in relation to insanity; and were they, in the final examination, to make as poor an exhibit in relation to measles or whooping-cough as they would if questioned on insanity, they would be relegated back to their books, and told that at least another term of study would be requisite before they could receive their diplomas.

Now the importance of increased attention to this subject on

the part of all practitioners will be apparent when we contemplate in all their bearings, and reflect upon, the wholesale wretchedness involved in the following reliable statistics:

Dr. J. A. Lush, President of the Medico-Psychological Association of London, in an address before that association in 1879, makes the following statement:

“In June, 1846, there were in England and Wales 18,322 persons of unsound mind in detention, and 4,700 persons of unsound mind at large, making a grand total of 23,000. The population was 17,000,000, or one in every seven hundred and thirty-nine of the population was of unsound mind. After one generation, according to the report for 1878, there were 70,823 persons of unsound mind, and the population was 25,000,000; or one in 352 of the population was insane. “It appears, therefore,” says Dr. L., “that, while the population has increased at the rate of forty-five per cent., the number of lunatics has increased at the rate of 250 per cent., and, assuming that another thirty-three years will yield similar results, accommodations will have to be provided in 1912 for nearly a quarter of a million of insane and imbecile persons in England and Wales; a prospect appalling to the physician, the statesman, and the philanthropist.”

In the United States, for want of a well-organized and efficient lunacy commission, we have not the same method of obtaining concise and reliable statistics as is enjoyed in Great Britain, but from the report of Dr. E. T. Wilkins, Commissioner in Lunacy for California in 1870, who was at great pains to gather and collate the facts touching upon this subject, we learn that there were in 1850, 31,397 insane and idiotic persons in this country, with a population of 23,191,876, or one in 738 of the population; and in 1870 there were 61,909 insane and idiotic persons, with a population of 38,555,983, or one in 622 of the population.

Now, gentlemen, we have an array of facts staring us in our faces, which calls for definite action on our part, and, with these facts before us, the outlook is truly appalling, and our responsibility in this matter will not permit us to give the answer which I have so often received from my medical brethren; “I neither know nor care anything about insanity; I leave that to the specialist.” It becomes us, as conservators of the public health, to devote a reasonable share of our time to the investigation of the nature of mental diseases, in order that we may, if possible, stay the progress of these maladies, so destructive in their nature to

the peace and happiness of our patrons, and so burdensome and costly to the tax-payer. And now, in order to bring this subject before my medical brethren in a practical form, and with no desire to seem dictatorial, I propose to refer to what seem to me to be some of the leading points to which the general practitioner should devote his attention.

First, the prevention of insanity. Under this head I include the study of hereditary transmission, and a general diffusion of a knowledge of this subject among our patrons. It is an established fact that insanity is emphatically a hereditary disease. To go into a detail of the reasons why insanity is so easily and almost surely transmitted from one generation to another would involve a discussion of the complex phenomena of the mind which is impracticable in a short essay; but with the fact of the hereditary transmission of insanity we have the fact before us that where this tendency exists we cannot obviate the cause; it is ever present, and it becomes the duty of the physician by counsel and advice to shield his patron from those causes which would operate to render what might be called a latent insanity active and pronounced. Thus, the excitable should be constantly guarded against any influence which might unduly stimulate the nervous centers, and arouse into undue action an already too active brain. The children of drunkards, hypochondriacs, and epileptics, whose nervous systems must of necessity partake largely of the peculiarities of their parents, should not only be guarded against the causes of excitement already alluded to, but should have the benefit of especial effort to build up a mental and physical stamina sufficient to resist the constantly operating tendency to mental weakness. Then again the question of marriage, the parties to which, one or both, inherit the insane diathesis, or have been subject to attacks of insanity, is one more upon which the practitioner should be well informed, and not only ready and willing, but anxious, to give sound and seasonable advice, and should be as conversant with the prospective consequences of such a union as he is with those arising from a marriage between persons with any purely hereditary physical malady. And this question of marriage under such circumstances involves the question of the chance of the development of insanity during pregnancy or parturition, and persons contemplating marriage under such circumstances should have the benefit of intelligent advice from the family physician, whose knowledge of insanity should render him so familiar with the subject that he can

approach it with confidence, and interpose a word in the right place, which shall not seem more out of place or uncalled for than is the advice of the family physician upon many other subjects coming legitimately within his care and counsel, and to which the patron listens as a matter of course.

Another matter in this connection, over which the intelligent physician has large control, is the correct education of the children of his patrons. With those children whose parents are healthy, and whose mental equipoise has never shown any disturbance, and whose physical stamina is up to a proper standard, there is no great danger of carrying the mental effort too far; but with those children whose hereditary tendency is to insanity, great care should be exercised lest the over-stimulated brain lose its equilibrium, and insanity, in one form or another, is the result. In this connection we may also refer to the need of sound advice in regard to the formation of correct habits of life, which to all is of great importance, but to those who inherit a tendency to insanity, of infinitely greater importance. Temperance in all things, but especially temperance as regards the use of spirituous liquors, should be insisted upon. One writer on insanity has said that "if we could lessen drunkenness, we might close some of our asylums; till we do this we shall have to enlarge them." On this subject physicians could, by strong precept and rigid example, exert a most wholesome influence. If they may not find it convenient to interfere in the marriage between those whose tendency is to insanity, or if they may not be able to curb the ambitious desires of the parents of precocious children to see their sons and daughters outdo their fellows in intellectual greatness, they can certainly exert a benign influence in staying the fearful plague of drunkenness and consequent insanity. The physician should also be competent to give advice in regard to the choice of occupation for those who inherit the insane temperament, for occupation has much to do with the development of insanity in those whose tendency is in that direction. But I will not enlarge further upon this part of my subject.

I will next refer to the prevention of insanity in those threatened with an attack. The first symptoms of the malady are, as a rule, seen by the family physician before the patient comes under the observation of the specialist, and in many instances the premonitory symptoms are so well marked that by close observation we may judge from the outset what the prospective danger is, and we

should be able to note those symptoms as they arise, and by the employment of judicious means, avert, if possible, the threatening evil. Persistent insomnia, protracted headache, with heat and flush of the face, and suffused eyes, altered emotions, excitability, and irritability of temper, in one whose previous conduct has been notably calm and self-possessed, great exaltation or depression of spirits, and many other symptoms which I will not enumerate. These we should at all times be prepared to note and closely observe, and, noting and observing, be prepared by advice, and it may be by active medical interference, to avert what may terminate in chronic insanity; for although the disease may be hard to understand, yet a close study of it will enable us to do much towards its prevention.

In regard to the treatment of insanity after its full development, it is not my place or purpose at present to discuss. I will simply say, however, that we should remember while treating this disease that, like all other diseases, it is often largely dependent for its existence upon organic or functional disturbance of some organ remote from the part immediately affected. No intelligent physician would think of treating disease of the kidneys without considering the condition of the digestive organs. The same idea applies largely to the treatment of all diseases, mental or physical.

In regard to commitments to asylums, there should be more intelligence and a better understanding than prevail at the present time. There are patients who can be best treated at home and among friends, then there are others who need just the kind of restraint and discipline which a well-ordered and properly conducted asylum affords, and the general practitioner should be able to closely discriminate between these two classes, and not hastily rush off to an asylum a case of acute primary dementia, whose symptoms of idiocy and imbecility have come on suddenly from some severe mental shock; neither should he too rashly consign to the asylum a case of acute delirious mania without first gathering and well considering all the points in the history of the case, lest by so doing he convert what might have been a short attack into a prolonged and not unlikely chronic mania. On the other hand, there are forms and types of mania, needing, as I have suggested, the restraint and discipline afforded by the asylum, and the practitioner should be able to determine this early in the progress of the case, in order that an early resort to asylum treatment may be sought, for it is a well-established fact that during the first three

or four months following such an attack the chances of successful treatment are vastly greater than at any subsequent period, and the physician should be sufficiently well-informed in regard to insanity that he may be able to give intelligent advice, and urge the removal of the patient to an asylum, against, if need be, the importunities of the friends to have him remain at home.

Let us, before closing, refer briefly to the matter of certificates by which patients are confined within asylums. The lunacy laws of Great Britain require the co-operation of four independent persons, of whom three must be registered medical men, in order to restrain any person under the provisions of the Lunacy Acts, and these medical men must examine the patient separately and make separate certificates. The medical certificates are to the effect that the patient was visited and examined on a certain day, separately from any other medical practitioner. It also contains the facts indicating insanity as observed by the physician, together with those gathered from other observers, if such facts can be obtained. In the margin of the certificate the medical man must state his legal qualification. It is not sufficient for him to simply state that he is a physician or surgeon, but he must give the name of the diploma he holds. He must also state that he is in actual practice. A retired practitioner, or one who has given up his profession, cannot sign such certificate. Now certificates thus carefully made and specifically setting forth the evidence of insanity in each case, serve to shield the medical man from the charge of committing a person to an asylum without proper evidence of his insanity. It also aids the superintendent in forming an early opinion of the nature of the case committed to his care, and the thoroughness of the whole transaction is such as to throw a safeguard around every person, so that none may be wrongfully deprived of their liberty. Under our present laws the tenure of freedom of a person in this State is invested in the hands of one respectable physician, and the respectability of that physician is determined by the Judge of Probate for the district in which he resides. There is nothing in the law which stipulates that the so-called respectable physician shall be a graduate of any medical school, and if the proposition is true, that we are sadly deficient in our education in this particular branch, or if the assertion so often made by superintendents of asylums is true, that common practitioners know but very little of the subject, it makes but little difference to any concerned whether the physician be a graduate or not. But premising it to be true, as claimed by the

superintendents (and they doubtless base their assertion largely upon the character of the certificates and accompanying histories of cases received from our respectable physicians), that we know but comparatively little on the subject of insanity, or take the admission made to me by half a score or more of our intelligent as well as respectable physicians, all regular graduates, and some of them connected with a medical school, as a sample of the attainments of us all as a class, that they have never given the subject of insanity any attention, and are not competent to judge in matters appertaining to it, and take into account the fact that we are the men in whom is invested the responsibility of determining the mental state of our fellow men; that we hold the power by a stroke of the pen to deprive individuals of all we hold most dear, the power to disfranchise them, to take from them all legal rights, incapacitate them from making a will, managing their property, and, in fact, rendering it impossible for them to transact any business legally, and finally incarcerate them within an asylum, away from friends and home, almost as effectually cutting them off from outside life and all its social privileges and enjoyments as they would be if sent into exile. Taking into account this immense responsibility, with all its concomitant results upon a fellow being, we are forced to the conclusion that, in the interests of common justice and humanity, we should fit ourselves for a responsibility of such magnitude by a careful study of the subject.

Much complaint has been made, many sensational articles have been written, charging that sane people have been wrongfully confined within our insane asylums, and the blame has too often been thrown upon the superintendents and boards of managers of our asylums for this wrongful detention. Now under our present laws it does not appear that the superintendents have any election in the matter of receiving and holding, for a time, at least, any person deemed insane by one respectable physician; he has no authority to question the validity or correctness of the certificate, and although the respectable physician might not, if required to do so, be able to cite a single proof of the insanity of the patient, yet his certificate invests the ruling of the judge and the complaint of the "one selectman" with a power second only to that of a writ of mandamus or of habeas corpus, and, however pregnant it may be of evil or injustice to the victim, he cannot escape its legal force.

Now I submit that in view of the distressing nature of insanity, the historical fact of its increase in the past, the just expectation

of increase in the future, none of us knowing how soon our own families may be invaded; in view of the relations we sustain to it as conservators of the public health; in view of the magnitude of the responsibility resting upon us when we are to decide the fate of one charged with insanity; in all its bearings and concomitant interests, it is our duty to study this subject, and as far as possible prepare ourselves to deal with it as intelligently as we do with any other branch of medical science.

ESSAY.

EXAMINATION OF THE EYE AS A HELP TO THE DIAGNOSIS OF EXTRA-OCULAR DISEASE.

N. E. WORDIN, BRIDGEPORT.

Diagnosis is at the very foundation of the physician's art. The mere giving medicine is the part of a charlatan; the mere amputation of a limb, that of an operator. The one may imply only a familiarity with the doses of drugs; the latter requires only a mechanical dexterity. When each acts intelligently, with a knowledge of the disease, its situation and its cause, you have on the one hand the physician and on the other the surgeon. Any man may strike and hit an object in the dark, but the chances are that he will miss. A captain may bring his vessel across the sea in safety without either quadrant or compass, but the probability is that he will not reach the intended haven. And so the true physician, like the skillful seaman, carries with him his tools or instruments of precision, continually examines, compares his data, and has intelligence in all that he does. "Mere observations on patients are never sufficient for our present aims: every kind of scientific assistances must be brought in and made use of." Science has shown its work in the many instruments which have been devised of late years for more accurately determining diagnosis. The stethoscope and the thermometer are the most important. To these may now be added the ophthalmoscope, which, though the latest, is being found to be one of the most useful in determining both local and constitutional diseases. With it, as in no other way, can be seen arteries and veins, in their natural condition, carrying the blood. By its aid, and by it alone, can be seen a physiological nerve, and its pathological changes carefully, closely, and constantly watched. The slightest changes in the lens, so

delicately nurtured and affected by certain conditions of the blood on which it feeds, can be only first seen by it. Poetry has depicted the eye as an index of the mind:

“The sparkling glance, soon blown to fire
Of hasty love, or headlong ire.”

—*Lady of the Lake, Cant. II.*

Science shows this little organ to be like a telescope, looking into which we discern beyond the danger and the disease. I want to bring out more fully this fact, which has had careful and thorough investigation for only a few years, and which has been taught in our best medical schools within a short period only—that extra-orbital, intra-cranial, and even some general constitutional diseases can be diagnosed by means of the conditions of the eye which they bring about—nay, more; that sometimes they can be certainly distinguished in no other way. This is not necessarily the work of the specialist, but it involves a working together of the general practitioner and the oculist, each prefacing, each supplementing, the work of the other. I am not a specialist, and do not now write for that class, but while delighting myself with study upon the eye during the past winter the thought of this connection came to me, and what little investigation I have given it has filled me with wonder—wonder at the beautiful mechanism of this part, and wonder that the relation spoken of had not been discovered before.

I shall not attempt to establish any points by logic, for I am burdened by the amount of testimony at hand; but shall, to establish facts, cite cases, most of which I am assured will be new to members of this society. Let it be understood further that I profess to bring little of my own. I have only culled from others and arranged it, with the hope that some of us may see the importance of this new help to diagnosis, that hereafter the earlier signs of lesions may be known, more lives be saved, and further additions be made to general and nerve pathology, to location of brain functions, to the contamination of the blood in disease, and to the effect of medication upon the human economy.* The distinguished names of J. Hughlings Jackson and Jonathan Hutchinson in general medicine, of Clifford Allbut and W. R. Gowers in ophthalmology, may be mentioned as having led and contributed much in this department.

* Owing to the length of this article the result of investigations with the ophthalmoscope as to the effect of medicines upon the retinal system must be omitted.

THE ARCUS SENILIS.

The arcus senilis is a change in the eye parallel with and indicating also changes in the system. It helps us in determining age. We use it frequently and almost unconsciously, not thankful to the eye for the help it affords us, in fatty degeneration of the heart. "Symptoms alone will not positively indicate the presence of this condition, nor will they with physical signs reveal the diagnosis between fatty and dilated heart, nor between the former and non-fatty softening. But there are other helps, one of which is the age of the patient; another may be the presence of arcus senilis, which shows a constitutional tendency to fatty change, and is significant, if signs and symptoms referable to the heart point to the degeneration of this organ." (Flint, "Principles and Practice," pp. 334-5.)

"Arcus senilis," then, in the words of Mr. Henry Power ("Some of the Principal Diseases of the Eye," p. 251), "is the result of a fatty degeneration taking place in the corneal tissue. Its presence is an indication of impaired nutritive functions, and generally of enfeebled vital powers, and is co-incident with other changes indicative of the accession of old age, as the presence of grey hair, ossification of the laryngeal and costal cartilages, and calcification of the arteries. It is also associated with fatty degeneration of other organs, as of the heart, liver, kidney, various muscles, bones, arteries, and other parts." The observation is a common one: let us give the eye the credit for what it tells us.

EXOPHTHALMUS.

Protrusion or exophthalmus is a condition of the eye which is attendant upon certain diseases—Basedow's, Graves' disease, or exophthalmic goitre. "In twenty cases of this disease reported by Emmet, all of which were of his own observation, exophthalmus was constantly present. In every case there was a diminution of sensibility in the cornea and conjunctiva, and also diminished reflex action of the lids. At times there occurred a slight impairment of the sight without any apparent ophthalmoscopic cause. The exophthalmus is with few exceptions binocular, but not always uniformly developed in both eyes." (Stellwag, p. 521.) It is not, however, of much diagnostic value, as the cardiac disturbance and the goitrous swelling generally occur before the protrusion of the eye. Diagnosis is therefore complete without the latter. It is worthy of note here, as bearing upon subsequent remarks, that

the retinal arteries in this disease participate in the general arterial dilatation which occurs so uniformly in the disease. The strong pulsation in the head and neck, in consequence of this and of the excited action of the heart, may be seen in the retina as a spontaneous arterial pulsation. The condition of the eye then is clearly seen to be the condition of the system, and the latter is partially revealed to us by the former, each progressing *pari passu*.

ABNORMAL CONDITIONS OF THE PUPIL.

Let me bring to notice observations which have been made upon abnormal conditions of the pupil, more especially in brain lesions. While admitting that the pupil is subject to constant change, whether from the presence or absence of light the stimulus to the iris, from mental emotion, from the action of drugs or other cause, yet when close and constant observations are made, with results varying but little in their uniformity, I am compelled to reason that some cause more or less definite prevails. Among the most careful investigators into the general subject of the connection between the eye and lesions of the brain are the physicians of the West Riding Lunatic Asylum. And be it said in passing, that to none does this help of the ophthalmoscope come with greater power than to the alienist physician. Robert Lawson, M.B., Assistant Medical Officer, and W. Bevan Lewis, L.R.C.P., London, Pathologist and Assistant Medical Officer, West Riding Asylum, are authority for the following clinical notes on conditions incidental to insanity. They can be found in Vol. VI of West Riding Lunatic Asylum Reports, pp. 133-145. "The conditions of the pupil as to size and reflex excitability of the sphincter and dilator of the iris to the stimulus of light, have long been regarded as elements in the symptomatology of cerebral disease, yet undoubtedly much obscurity still involves this subject, and more especially with regard to the relative value and significance of these signs. The subject is one of peculiar difficulty, owing to the complex arrangement of the nervous apparatus of the organ of vision. Irritation of any cutaneous nerve, whilst causing dilatation of arterioles throughout its own area of distribution, is accompanied by quickened cardiac action, elevation of arterial tone elsewhere, and dilated pupils. Certain psychico-motor discharges are invariably accompanied by a dilatation of the pupils, both in conditions of healthy and of abnormal activity of the nervous centers. Emotional states have a like influence; fear and sorrow have as a frequent accompaniment permanently dilated pupils.

“The above considerations lead naturally to the query how far this extensive reflex relationship may be affected in morbid conditions of the brain and spinal cord; and with the object of replying to this question I carefully examined all the male epileptics and general paralytics within West Riding Asylum. When the sensory columns are intact, whilst the foot is pricked or otherwise irritated, the impression is instantly signalized by the dilated pupil. In cases, therefore, of cerebro-spinal disease, when this reflex dilatation of the pupil is active, we are in a position to affirm that the sensory strands of the cord as far as the cilio-spinal region are not seriously implicated. An implication of the higher spinal tracts, whilst lower dorsal and lumbar segments remained functionally intact, was a characteristic feature in my examination of both general paralytics and epileptics, occurring in either class with about the same relative frequency.”

It has been asserted by not a few writers that the earlier stages of general paralysis are almost invariably marked by a contracted pupil coincident with the congestive conditions preceding the atrophic changes ushered in at a later period. The latter stages of general paralysis, according to these authors, show us usually a dilated pupil corresponding to the period of atrophy. The contracted pupil is, according to these examinations, a frequent accompaniment of the very latest stage of the disease. Forty cases of general paralytics were tabulated, the duration of the disease being from one to twelve months.

In twelve cases, in which the disease had lasted one year or less, the right pupils measured from 1-4 millimeters, the left 1-4.5 m.m.

In eight cases, above one year but under two in duration, the right pupil was 1-4, the left 1-3.5.

In seven cases, two years but less than three in duration, the right pupils were 2-5 m.m., the left 2-4.

In three cases of three years' standing, the right pupils were 2.5, 3, and 3 m.m.; the left 2.5, 3, 3.

In four cases of four years' standing, the right pupils were 1.5, 1.5, 2.5, 4.5; the left 1.5, 1.5, 2.5, 4.5.

In one case of five years' standing, the right pupil was 1 m.m., left 1.25.

In one of six years' standing, the right was 1.5, the left 1.5.

Cases of several years' (uncertain) standing, the right pupil was 2, left 1; right 1, left 2; right 2.5, left 2.5; cataractous, 1.

The differences between the pupils, in cases where these were unequal, vary from $\frac{1}{16}$ - $\frac{1}{2}$ inch, and the eyes, where this inequality

was observed, showed also differences in the condition of the optic discs, the atrophy being most advanced in the eye where the pupil was largest. The pupils were found active to light in twelve cases, sluggish in nineteen, inactive in five, and unequally active in seven. The average size of the normal pupil is 4 m.m.

Doctor Aldridge, of the West Riding Asylum, from whom these statistics are taken, says in conclusion: "The inequality of the pupils in cerebral disease is a symptom universally acknowledged as carrying with it in most cases a very serious prognostic indication. It has a greater weight in the topographical diagnosis of cerebral lesions. Its clinical data are such that in most cases it is of extreme value as a localizing symptom. In cases of mental disease, of epilepsy and other discharging lesions induced by coarse disease and accompanied by marked inequality of the pupils, I believe the unequal pupils serve to localize the lesion hemispherically, when we are able to eliminate such fallacies as direct pressure upon certain nerve tracts from tumor, or the presence of intra-ocular disease. Cases of general paralysis, as is well known, afford us a large majority of unequal pupils. Thus Seifert (*Zeitschrift f. Psych.*, X, p. 561,) observed seventeen cases in twenty-five paralytically. The table of my results shows not only general paralytically but epileptically, cases of chronic atrophy, demented from other causes, etc., in whom discharging or destroying lesions were localized in one or other of the hemispheres, thus affording us a clue to the localizing value of a prior fixed irregularity in the pupil. I believe one may find in these results strong grounds for belief that the dilated pupil is on the side of the lesions, and thus if we note in a general paralytic that the left pupil is the larger of the two (eliminating, of course, such fallacies as intra-ocular changes, etc.), and the patient be seized with a congestive or epileptiform attack, the chances are that he will suffer from right hemiplegia or convulsions, *beginning at, if not confined entirely to, the right half of the body.* It is of importance also to note that during and after the convulsion or paralysis, the condition of the pupils may be quite reversed, as I have had frequent opportunities of verifying. A table of twenty-two cases, which includes all the cases in the three volumes of the Asylum case books, where markedly irregular pupils were *succeeded* by paralytic or convulsive seizures, shows that in every case save one the convulsions or paralysis were on the side opposite to the pupil largest prior to the seizure." We have the insane ear characteristic; this condition of pupil may be called the insane eye.

Not alone the insane eye, however, for the same condition is found in lesions of the spinal cord. Thus, in a monograph upon sub-occipital white swelling, by Moustapha, published in 1874, the author says that a certain number of nervous phenomena, like dilatation or contraction of one or both pupils, may appear in an isolated manner in compression of the cervical portion of the cord, and Ogle has remarked the modification of the pupil in several cases of Pott's disease of the cervical region of the spine. Indeed, in Pott's disease of the spine the most common eye symptom is a moderately dilated, very sluggish but still movable pupil, always the same in both eyes, and almost never absent. The pupil contracts very slowly and equally on exposure to a bright light.* Some of these irregularities of the pupil (in spinal lesions) are quite remarkable, such as the case reported by Eulenberg, in which the right pupil remained dilated during four weeks, after which it gradually regained its normal dimensions. In a monograph by Joffroy, entitled "Hypertrophic cervical pachymeningitis of spontaneous origin," a case is reported of progressive muscular atrophy with paraplegia, great pain in the limbs, lesion of the anterior horns of gray matter, and symmetrical sclerosis of the lateral columns, in which there was an elliptical dilatation of the right pupil.

In traumatic lesions of the spinal cord, particularly in the cervical and superior dorsal, we sometimes meet with contraction of one or both pupils, and sometimes with dilatation. Charcot tells us that the spasmodic dilatation always precedes the paralytic contraction. These modifications in the size and shape of the pupil may be directly due to compression of the superior region of the spinal cord, for many observers have seen them in cases of Pott's disease of the cervical vertebræ. Rollett reports a case of dilatation of both pupils, accompanied by a moderate degree of exophthalmus, which preceded for some time the motor paralysis of the legs. Indeed, it is well known to specialists that lesions of the motor and sensory nerves of the eye are quite common in diseases of the spinal cord. It should be familiar to the general practitioner.*

DISTURBANCE OF SIGHT.

Another condition connected with the eye which may help to diagnose some extra-ocular lesion is a disturbance of sight, the proper function of the eye. Disturbance of vision may be general,

* Bull. Am. Jour. Med. Sciences, July, 1875, p. 65.

as amaurosis, a "diminution or complete loss of sight, without any perceptible alteration in the organization of the eyes"; or partial, as hemiopia—"a depraved vision in which the person sees only one-half of an object." Another form is defect in the field of vision which may be limited in some direction, and diplopia, in which condition objects appear double or even triple.

The most common connection of amaurosis with constitutional disease, the one best known, is that from Bright's, or rather from nephritic, disease. "A Manual and Atlas of Medical Ophthalmoscopy," by W. R. Gowers, M.D., F.R.C.P., is the latest authority on this subject. We will take greater pleasure in referring to it because it is an outgrowth of work purely medical. The cases cited in it were met with in general practice. "In all forms of renal disease loss of sight from uraemic poisoning may occur. Its characteristics are the sudden onset, completeness, the preservation of the reaction of the pupil, and the quick disappearance of the symptom when the blood state is relieved by purgation or diaphoresis." (p. 164.) This symptom is mentioned by William H. Dickinson "On the Pathology and Treatment of Albuminuria." "A derangement of vision which so frequently accompanies granular degeneration of the kidneys." "A connection between albuminuria and amaurosis has long been recognized." (p. 134.) Moreover, this kind of amaurosis especially distinguishes granular degeneration of the kidneys, and is found, says Dickinson, in no other. Prof. Flint* says, speaking of chronic Bright's disease in general, "Troubles relating to vision constitute, in certain cases, important symptoms. Diplopia or double vision, hemeralopia or night-blindness, myopia, and presbyopia are attributed and perhaps are fairly attributable to the disease." The next edition of Prof. Flint's book will at least leave out the word "perhaps." Indeed, this cause and effect have long been noted. The association of transient amaurosis with dropsy, after scarlet fever, was noted by Wells in 1812. ("Med. Chirurg. Trans." Vol. III.)

From the result of experiments made by F. Kundet† it was seen that injecting saline solutions into the intestines of living frogs made their lenses gradually opaque by increasing the specific gravity of the blood. The opacity disappeared as soon as the consistency of the circulating fluid was restored. Now the lens in its natural or normal state contains upwards of

* "A Treatise on the Principles and Practice of Medicine," 1863, p. 766.

† Zeitschrift für Zoologie von Siebold u Kölliker, Bd. VIII., p. 446, 1857.

60 per cent. of water. We may therefore concede logically that alterations increasing the specific gravity of the blood may very well render the lens opaque. As a matter of observation we find the same result. Mr. Gowers says, (op. cit., p. 178,) "Defects of sight are common in diabetes (as Bouchardat pointed out many years ago), but changes in the fundus oculi are rare. The most frequent cause for the defect is cataract, which is apt to occur in these cases. Occasionally considerable amblyopia occurs without ophthalmoscopic changes, probably due to the blood state, and comparable to uraemic amaurosis, although probably the result of a different condition of the blood." Prof. Gross' testimony is, ("A System of Surgery," Vol. II., p. 268,) "There is no question that the condition of the general system often exerts a powerful influence upon the production of cataract. I have repeatedly noticed the disease in persons of broken-down constitution, and many cases have been published in which it was evidently caused by diabetes." "Diabetes causes cataract by the density of the fluid in which the lens is surrounded and from which it derives its nutriment rather than to the artificial senility which it occasions." ("A practical Treatise on Diseases of the Eye," by R. Brudenell Carter, p. 297.) Without the ophthalmoscope cataract in its earlier stages cannot be certainly diagnosed, but still we have the beginning loss of sight—the amblyopia.

Embolus may produce amblyopia. Indeed, the following case given by Gowers, No. 48, p. 318, was one in which the trouble of vision was the first thing which drew attention to the existence of the cardiac affection. "Louisa P., single, aged twenty, came under observation in April, 1874. In the preceding February she was quietly sitting at work, when a dark shade seemed to come over the right eye. She closed her left eye and found she could not see with the right. She had no pain in the eye or head. After a few days some return of sight followed, which gradually improved up to a certain point. When seen, with the left eye she could read Jäger No. 1 at six inches; with the right eye only No. 5 Jäger at 6 in. Left field of vision normal; right presents a large defect below, involving about nearly half the field, extending higher on the nasal than on the temporal side, the base below the apex at the blind spot. Ophthalmoscopic examination showed complete obliteration of the nasal branch of central artery and narrowing of two others, etc. At the heart there was a well-marked, loud, pre-systolic, mitral murmur. No history could be obtained of rheu-

matic fever, scarlet fever, or chorea. She had never suffered from palpitation of the heart. As long as she could remember she suffered from attacks of momentary dimness of sight. The diagnosis of cerebral embolism may be generally sufficiently clear without the ocular accident, but its occurrence is an important corroborative, and almost demonstrative proof of the nature of the cerebral lesion." Amaurosis is produced by and sometimes is one of the first symptoms of tumor in the brain, which produces blindness by the pressure of its mass. Basilar meningitis, whether primary or secondary, acute meningitis, periostitis of the base of the skull, tumors of the base of the brain, actual disease of the brain, as encephalitis, abscess, softening, tubercles, gummy tumors, cause amaurosis, which is sometimes an early symptom. The danger of meningitis to the sight has been known for a great number of years. Leucocythaemia, that disease occupying lately the closer attention of the physiologist, causes, among other defects, that of sight. Mr. Maurice Perrin (Imp. Soc. of Surgery, March, 1870,) has called attention to a case of the kind. The patient complained of a mist before his eyes. The field of vision was contracted from the periphery to the center, principally on the left side. The case is recorded in London Ophth. Hosp. Reports, Vol. VII., p. 265. Of amaurosis caused by hemorrhage, whether from the uterus, stomach, lungs, or other organs, that produced by lactation or other cause resulting in prostration, it is unnecessary to speak. Such cases are interesting as showing the connection between the eye and the body, but are no helps to diagnosis, because the latter is already apparent. Diseases of the spinal cord, particularly tabes dorsalis, have been long recognized as sources of amaurosis, the so-called amaurosis spinalis, but the symptoms of spinal disease precede. Charcot says that the diplopia in spinal sclerosis is a phenomenon of the beginning of the disease, and is generally transitory, but the amblyopia is a lasting and very frequent symptom in cerebro-spinal sclerosis "en plaques," which, however, rarely leads to total amaurosis. This is particularly worthy of note in view of the fact that autopsies of such cases show patches of sclerosis completely surrounding the optic nerves, and yet only a moderate amount of amblyopia was present. (Charles S. Bull, Am. Jour. Med. Sci., p. 62, July, '75.) Jaccoud, in his "Pathologie Interne," 1877, alludes to 89 cases of brain tumor reported by Lebert and Friedreich; in these there was amaurosis in 66, a percentage of 74.15. In the 91 cases in Annuske's list in which the

condition of the sight was noticed, amaurosis occurred in 73, a percentage of 80.21. Brown-Séquard even claims to locate the lesion by means of these defects of vision. A paper like this is not the place for a discussion of such a subject. Those interested may find in the N. Y. Medical Record, Jan. 12, '78, Vol. XIII., p. 41, his lecture delivered at the Bellevue Hosp. Med. Coll., Nov. 30, '77.

Hemiopia is a depraved vision in which the person sees only half an object. "A symmetrical hemiopic defect in the field means an intra-cranial cause; an unsymmetrical lateral defect, especially a loss of the temporal halves, commonly means pressure on the chiasma, a very common cause of blindness in these cases, the pressure being exerted by a distended third ventricle. Complete loss of sight of one eye and loss of the adjacent half of the other field is probably of cerebral origin. A peripheral restriction of the fields usually means damage in front of the optic commissure."—*Gowers*. (Hemiopia is not a certain indication of intra-cranial or general disease, for it may be owing to local causes, as detachment of the retina, functional derangement of the retina. A clot of blood or a tumor interfering with the integrity of either optic tract may produce it.)

This condition (hemiopia) has been of service to some writers in demonstrating that the nerve fibres decussate in the optic chiasm. Among these writers is George C. Harlan, M D., Surgeon to the Wills Ophthalmic Hospital, Philadelphia. As his article is of interest and point upon this particular subject, I take the liberty of making extracts from it. See "Transactions of the College of Physicians, Philadelphia," 3d Series, Vol. iii, 1877, p. 170. "The hemiopia should be sharply defined, the line of sight should be able to be distinctly drawn. This may be considered as furnishing a very strong presumption at least in favor of lesion of the optic tract, or of the brain behind it, because it would seem hardly possible that even in the chiasm any form of disease, or of pressure from neighboring growths, should accurately dissect out a certain set of fibres, leaving the others completely intact.

The following is a case so representative that it seems worth while to quote it here, although no post mortem examination, (the only proof) was made. J. H.: sight was good until four weeks before the examination, when it became obscured suddenly. He had had diabetes three or four years ago, but the sugar had disappeared entirely from the urine, and the health seemed restored. He had lately had some headache, feeling of

weight on top of his head, slight mental confusion and loss of memory. The right side of the field of vision was deficient, almost obliterated to the median line in each eye. In the left side he could read ordinary print with a slowness and difficulty that seemed to be due partly to imperfect vision, and partly to loss of memory and of the power of mental concentration. There was no other paralysis. (The ophthalmic appearances were normal, except a slight engorgement of the retinal veins and several small yellowish-white spots in the neighborhood of each macula, suggesting albuminuria. Albumen was found in the urine in considerable quantities.) Eight months afterwards the edge of the obscure portion of the field had receded, and was three inches to the right of the point of fixation at a distance of one foot from the eye. The line of demarcation was still sharp and vertical and perfectly symmetrical in the two eyes, so that the same diagram accurately described the field in each. The ophthalmoscopic appearances in this case were barely sufficient to excite a suspicion of the earlier stages of albuminuric retinitis which, as yet, interfered but little with vision. There was nothing in this case which any general practitioner, not a specialist, could not discover, except the ophthalmoscopic appearances which were slight. The right hemiopia pointed to a lesion of the left hemisphere of the brain, while the albuminuria indicated a condition of the vessels that would predispose to hæmorrhagic extravasation, and the mental symptoms confirmed the diagnosis of cerebral disease. The post mortem examination is the only proof that tumor or intracranial disease has existed—or the only proof with which we should be satisfied. The literature of hemiopia furnishes only four cases of nasal hemiopia in which such examination has been made. One is recorded by Müller (quoted by Knapp in Brown-Séquard's Archives). The symptoms were complicated, and it was as much a case of temporal as of nasal hemiopia. There was first temporal binocular hemiopia, then total blindness, and then nasal hemiopia with well-defined lines. Post-mortem examination showed a tumor in the sella turcica as large as a medium-sized apple. A second case is given by Schüle (quoted by Plenk, in "Archives of Ophthalmology and Otology," Vol. v, No. 2, p. 201). The disease began with amblyopia in the right eye, atrophy of the papilla, with blue discoloration and marked reduction of eccentric vision; later, atrophy commenced in the left pupil with a similar course and changes in the arterial vessel. Autopsy: the ventricles much dilated, the infundibulum and both nerves distinctly

atrophied and of a grayish color. The same author also quotes a case observed by Wagner and Schmidt. The perceptive and non-perceptive portions of the visual fields were not divided by a sharply-defined line. (The ophthalmoscope showed neuro-retinitis.) On post-mortem examination a tumor was found in the median line of the brain, involving the infundibulum, fornix, and septum pellucidum. The microscope showed decided atrophic changes both in the nerves and retinae." Sämisch (Plenk: loc. cit.) reports a case of binocular temporal hemiopia in which there was a sarcomatous growth involving the anterior angle of the commissure. Two cases of hemiopia are reported in "Archives of Ophthalmology and Otology," Vol. V, No. 2, one by J. Hirschberg of Berlin, and one by Doctor T. R. Pooley of New York. In the first there was "defined, symmetrical, right-sided defect in the visual field of both eyes, with a nearly normal acuity of vision (and a normal ophthalmoscopic picture), accompanied by aphasia and hemiplegia of the right side. The autopsy revealed a tumor as large as an apple in the left frontal lobe, implicating the left optic tract. In Doctor Pooley's case there was right-sided hemiopia sharply defined in the vertical meridian, partial hemiplegia of the right side (and choked disc in the left eye, but no change of appearance in the right). On post-mortem examination a gummy tumor was found in the left posterior lobe of the brain. The left optic thalamus and the neighboring brain substance were completely softened. A third case is also referred to in the same journal—(Jackson quoted by Plenk). There was bi-lateral left hemiopia and the autopsy showed pronounced softening of the right optic thalamus. In a case of left hemiplegia, left hemi-anæsthesia and left hemiopia, Dr. Hughlings Jackson diagnosed disease of the right optic thalamus, and post-mortem examination showed softening confined to the posterior and inner part of the right optic thalamus. ("Med. Times and Gazette," London, Oct. 28, 1876.) Doctor Gowers also reports a case in which there had been hemiopia for several months before death, and in which post-mortem examination showed softening of the posterior tubercle of the optic thalamus on the opposite side. [Ibid.] Other facts in my possession regarding hemiopia, some notably from Dr. Seguin, would prolong this division of the subject to too great length. All these are facts cited by men foremost in their departments. We must perforce believe them, for they are more powerful than logic. Hemiopia is a symptom of brain lesion, and is a help to its diagnosis to which attention should be paid.

A defect in the field of vision is a third manner in which affected sight may declare some disease beyond the eye. Generally the alteration is a limitation at the margin of the field, progressing concentrically until only a small central area is left. Occasionally the diminution is limited to one-half of the field, vertical or lateral. In pressure on the chiasma, for instance, if the pressure be on the posterior part of the chiasma, the inner halves of the field are lost, and if upon the anterior portion of the chiasma, the two outer halves. Color-blindness generally accompanies this general loss of vision, but perception of color differs so in different individuals, and as the area of the field of vision in which these colors are seen varies for each color, it is not advisable to dwell upon what might more particularly come within the bounds of the oculist.

Another form of disturbance of vision denotive of trouble within the cranium is diplopia,—a word which the Greek scholar will at once interpret, double sight. Sometimes more than two objects are seen. The affection arises from some derangement of the visual axes, caused generally by paralysis (which may be very slight) of one of the motor muscles of the eye. And this brings us to the next and most comprehensive of the objective symptoms—

PARALYSIS.

The motive power of the eye has its seat in the pons Varolii and the medulla oblongata. It is well known that injuries of those parts cause complete immobility of the eye, with dilatation of the pupil. Now it will be evident to any one that a lesion at the origin of any of the motor nerves, the third, fourth, sixth, or seventh, or indeed a cause along their course interfering with their conductivity, such as the presence of a tumor, or, again, compression of these nerves at the sphenoidal fissure their exit from the cranium, will produce paralysis complete or partial, of some muscle of the eye or eyelid. Specialists in the study of nervous diseases have seized these salient points as greatly aiding them, and they claim not only to diagnose but even to localize the lesion by their aid. I quote first from Dr. Brown-Séquard, in a lecture delivered by him at the Bellevue Hospital Medical College, Nov. 30, 1877, and published in the *New York Medical Record*, Jan. 12, 1878. "If you look at a patient who has been attacked with brain disease you may notice that a kind of paralysis is present which consists in an inability to close the eye; the orbicularis palpebrarum is paralyzed, and this form of paralysis occurs almost exclusively in cases of disease of the pons Varolii. This muscle is not found

paralyzed except very exceptionally, in cases in which the disease exists elsewhere than in the pons. If you direct the patient to close the eye, in case the disease exists in the lower part of the pons Varolii you will find that he is unable to do so. There is therefore in that symptom a characteristic condition which in almost all cases shows that the disease is either in the pons Varolii or near there. If the orbicularis palpebrarum is paralyzed, and the side of the face is also paralyzed, and the limbs are paralyzed upon the opposite side of the body, there is almost a certainty of the existence of disease in the lower part of the pons Varolii. There are other symptoms which show that the disease is in the pons Varolii or in the medulla oblongata, or in both. One of these is very striking, and is called nystagmus. It consists in an involuntary spasmodic oscillation of the eyeball. Another feature of interest consists in a symptom which has been studied only within the last fifteen or twenty years, and more particularly by Vulpiau and his pupil at Geneva. This symptom consists of a deviation of the eyes and of the neck. If I look towards my left shoulder you will observe that both my eyes and my neck are turned in that direction, and you have an illustration of what has been called conjugate deviation of the eyes and neck. This is a very frequent symptom indeed of softening of the brain. It is also a frequent symptom in cases of hæmorrhage in the brain. If you have a patient stricken down with apoplexy, showing symptoms of hæmorrhage into the brain, which consist of hemiplegia, loss of consciousness, difficulty of breathing, coma, etc.,—which generally accompany hæmorrhage in the encephalon,—if you have these symptoms, and you find there is no appearance of facial paralysis, no appearance of paralysis of the tongue; and if you find after the patient has recovered from the first effects of the blow, that there is vomiting, amaurosis, or diminution of sight, and considerable headache, you can, with a great probability of being correct, say that there has been hæmorrhage into the cerebellum" (op. cit., p. 83). More reliable are the statements of Dr. E. C. Seguin, because he has given only results which have been fully established by careful research,—well-determined clinical forms,—and because he is known to us all as a thorough, careful, scientific physician. I select now from a series of lectures by Dr. Seguin, "On the Localization of Spinal and Cerebral Diseases," delivered at the College of Physicians and Surgeons, December, 1877, and January, 1878, and published in the *N. Y. Med. Record*, vols. XIII and XIV. "Lesions of the basis cerebri, especially if involving the pons and crura,

give rise to the following symptoms: paralysis (often of crossed variety) anaesthesia in the face and limbs, impairment of equilibrium, changes within the eyes, no psychological symptoms." Lecture V, vol. XIV, p. 101, August, 1878. This writer, for clinical purposes, groups the pons and the parts which lie in front of the crura, viz., the optic tracts and nerves and the olfactory apparatus, under the head of basis cerebri. Now the nuclei of the nerves supplying the ophthalmic apparatus, the third, fourth, fifth, sixth, and seventh, is found near the median line, underneath the floor of the fourth ventricle or its continuation, the aqueduct of Sylvius. "Lesion in the anterior portions of the pons forward of an imaginary transverse line passing through the origin of the trigeminus, as shown by Gubler, does not produce crossed paralysis of the seventh nerve and body type, but both the face and body are paralyzed on the same side, that is, on the side opposite the lesion. A point for differential diagnosis is that when the cerebrum is injured there is almost invariably conjugate deviation of the head and eyes (referred to by Brown-Séquard) toward the affected hemisphere; in pons lesions nothing of the kind occurs. Lesions occupying the posterior region of the pons above its middle.—Besides paralysis of the face and body on the side opposite the lesion, we are likely to have anaesthesia of the paralyzed parts, even amounting to hemi-anaesthesia (without involvement of the special senses). Other symptoms often produced are epileptic convulsions, impairment of sight from neuro-retinitis, and various forms of paralysis of ocular muscles. Lesion in the posterior region of the pons above its middle may produce neuro-retinitis, epileptic seizures, with, besides, palsy of the sixth nerve, and bulbar symptoms if the lesion involve the medulla. The symptoms of lesions of the crura cerebri on one side of the median line are exceedingly definite, and might even be designated pathognomonic. The third nerve, its trunk or origin, is involved in the disease or compressed, as well as the great motor tract, which, lower down, is to decussate. Consequently we observe a crossed paralysis of the third nerve and body type, that is, if the right motor oculi and left extremities be paralyzed in a patient, we may feel sure that he has a lesion under or in the crus cerebri. The optic tract curves around the crus on either side, and it at times happens that symptoms characteristic of injury to one optic tract present themselves. Lesions placed in the median line, or involving both crura, more or less.—The symptoms will be, in case of lesion situated anteriorly (inferiorly), wholly

motor, viz., paralysis of both third nerves and of both sides of the body below the neck. In case of lesion involving the tegumentum cruris, marked disorders of insensibility, neuro-retinitis, and convulsions will occur. In the above lesions the special senses (except that of sight) are not involved. Lesions lying in front of the crura and behind the chiasm, may press upon the motor nerves of the eye as they traverse the middle fossa of the cranium on their way to the sphenoidal fissure, thus producing a variety of paralytic symptoms about one or both eyes."

Professor Bartholow in the following manner uses these symptoms of paralysis to locate lesions of the brain—as see a clinic held by him Feb. 5, 1880, at the Jefferson Medical College Hospital, and reported in the "College and Clinical Record," Vol. I., No. 2, Feb. 16, 1880, p. 20. A patient had syphiloma of the brain, the deposit being in a position to affect both the motor and sensory tract. "What must be the location of a lesion to affect both motion and sensation, that lesion being syphilitic in character? In the first place, syphilitic deposits generally take place in the middle fossa of the skull and at the base of the brain. Secondly, we have a uni-lateral paralysis: what must be the position of the intra-cranial lesion to produce this condition? Here we are helped to the recognition of the proper site of the lesion by the state of the pupil. Why? Because the third nerve lies in close connection with the crus cerebri in the middle fossa of the skull. Having here a lesion that is in some relation to the third nerve, what conclusion would you draw from the fact that the pupil of the right side is contracted? That the lesion is an irritative and not a destructive one; the third nerve being simply impinged upon and irritated, according to the rule that every motor nerve when irritated causes contraction in the muscles to which it is ultimately distributed. That there is something irritating the third pair of nerves leads us again to the point that there is disease in the middle fossa of the skull. As none of the other cranial nerves (except the third and seventh) are affected, the special senses being unimpaired, we conclude that the disease is limited in its extent to that portion of the base of the brain, but on the opposite side from the hemiplegia, owing to the crossing of the nerves." But why the need of so accurate a diagnosis? Suppose the lesion can be localized—what then? Diagnosis is a guide to prognosis—to treatment even by operation. Thanks to the labor of such men as Broca, Bischoff, Turner, and others, cranio-cerebral topography is now pretty well understood. The physician or surgeon can de-

termine with considerable precision such points, for instance, as the relations of the fissures of Rolando and Silvius to cranial sutures, the superior levels of the great cerebral ganglia, and the situation with reference to external areas of such important convolutions as the third frontal and angular gyrus. The surgeon's trephine may be guided with greater certainty than ever before to the seat of a lesion. Again, "In practice, when we have completed the examination of a patient several questions are put to us by the patient, by his friends, or by ourselves. Is there disease? What is the disease? What are we to do for the cure of the disease or for the relief of the patient? Will the patient die or recover? To the physician who is not a mere prescription-writer, who aims at infusing as much science into his practice as possible, and who believes he is not in the world for the purpose of gratifying his patients at so much per visit, but that he owes himself a debt of training and self-culture, and who has a regard for science—to such a physician the first three questions assume a justly-great importance.

OTHER DISTURBANCES OF MOTION.

Paralysis is lack of motion. Its extreme opposite is excess of motion, and this in the eye is likewise an indication of remote disease. Nystagmus, Brown-Sèquard tells us, is a very striking symptom of disease in the pons or medulla.

A want of co-ordination between the eyes is a characteristic symptom of progressive locomotor ataxy, resembling precisely the effect of the lesion upon the other muscles of motion of the body.

CONSTITUTIONAL AND OTHER CAUSES.

The eye in various general ways may indicate some disturbance of the system beyond itself. Doctor Henry D. Noyes, of N. Y., in a paper read before the N. Y. Academy of Medicine, March, 1879, refers to matters connected with the eye, partly hygienic and partly within the domain of pathology. Enfeebled endurance of accommodation and equally feeble power in the extrinsic ocular muscles, as manifested by pain in attempting to read or sew, or to use the eyes continuously, are symptoms. No persons complain of this so frequently as those who suffer from uterine disease, whatever the form of lesion of the female generative system may be. This condition is very widely prevalent. "So, too, when persons are recovering from any severe illness, such as a fever, or from protracted exhaustion, or after prolonged lactation, or watching

with invalids, or great loss of sleep, when there has been much grief and weeping, or after severe mental strain; also as a consequence of masturbation, or after severe loss of blood, or in severe or chronic dyspepsia, impaired eye-power is pretty sure to appear." Stellwag says, p. 68, "Keratitis punctata is rarely an independent disease. Aside from the original complaint with which it is connected, disposing causes for the punctate exudation have been sought in certain dyscrasia, especially in constitutional, developed, or hereditary syphilis, (Hutchinson,) in chlorosis and anaemia as well as in serofula. A peculiar kind of corneal inflammation is the neuro-paralytic. It is developed with more or less hyperaemia and oedematous swelling of the conjunctiva, as a result of disturbance of conduction of the fifth pair of nerves. In total paralysis of the branches of the fifth pair going to the eye purulent destruction of the cornea often occurs. The entire cornea is then generally affected. Neuro-paralytic ulcers occur during the course of severe constitutional diseases, as typhus fever, scarlatina, the later stages of epidemic cholera. Panophthalmitis may be secondary, depending on certain blood diseases, such as pyaemia, tuberculosis, typhus, and puerperal fevers, glanders, etc.," p. 78. Prof. Hooner of Zürich has called attention to herpes of the cornea following severe catarrhal affections of the respiratory mucous membrane. Visiting the children's clinic one soon becomes familiar with an interruption in the circulation about the eye temporarily produced by whooping-cough. A child presenting blood extravasated under the conjunctivae is pointed to across the room for a diagnosis. Small hæmorrhages in the structure of the eye, as the conjunctiva and retina, are of much prognostic value in advanced life, as indicating the condition of the small vessels of the brain.

The occurrence of amblyopia and amaurosis during convalescence from typhoid fever is well established, although rare. The frequency with which renal disease accompanies and succeeds scarlet fever renders affections of sight not very rare consequences of the disease. Mannhardt, in the *Monatsblätter für Augenheilkunde*, 1865, reports four cases of affections of the eye, acute catarrhal conjunctivitis, two of amblyopia due to paresis of accommodation, and one strabismus with increase of squint during the attacks, all of malarial origin, occurring periodically.—*Am. Jour. Med. Sci.*, Apr., '77, p. 457.

THE OPHTHALMOSCOPE.

But the most important diseases, the most certain symptoms, are painted upon the retina or traced upon the ground work of the

optic nerve. The ophthalmoscope is now recognized as a help to diagnosis by didactic and clinical lecturers on Theory and Practice. Prof. Da Costa teaches so in the lecture-room, and uses it in his practice. It is a well-known fact that many cases of constitutional disease are detected at the eye clinic which otherwise would have remained unknown until perhaps too late. The eye very often gives the first sign of danger within, and it will soon be necessary for the general practitioner to have some knowledge of this means of detecting disease. "To affirm that the eye could exist, live, and see apart from the brain and body, would be to utter an absurdity so gross that the most ignorant would ridicule it. To affirm that the diseases of the eye can be studied and treated successfully without regarding the relations of the eye, anatomical and pathological, to the body at large, is in reality equally absurd. The absurdity may perhaps not strike so forcibly, but a moment's thought is enough to show that if the assumed physiological independence of the eye is absurd, its pathological independence is simply a corollary."—*Robert Barnes, M.D., "Lancet," June 3, 1880.*

No more then can diseases of the body be studied without considering their relations to the eye. Their physiological, their pathological independence is absurd. The ophthalmoscope is an arm of precision brought to bear upon nervous diseases: an instrument requiring minute accuracy in its use, and one revealing modes of nerve change during life, which, before its discovery, could be known only after death and in their results. It may be applied not only to the diagnosis, but also to the investigation of modes of nerve change. It will, like the microscope, not only teach us to see the new things which it itself exhibits, but it will train our eyes to see many more new things which we before had overlooked. Indeed, one great claim the ophthalmoscope has upon us is that it demands close observation and careful discrimination. By means of it we are for the first time permitted to see the commencement and progress of change in the life of nerve tissue, and to ascertain the modes and times of such change. For the true method of investigating disease is in observing minute and early deviations from health, rather than great and striking lesions. And this is another advantage: the specialist sees the eye only when vision has begun to be affected—after changes have been going on within for, it may be, a long time.

I shall content myself with citing some interesting clinical cases

in illustration of this division of the topic, taking such as are not found in the text books, and therefore, I trust, of more interest because new. To avoid detail and to simplify, I make neuro retinitis, optic neuritis, and choked disc synonymous and interchangeable terms. This condition may be briefly described as congestion of the disc with œdema. When seen there is a disappearance of the edge of the disc, the edge being blurred so that its position has to be guessed at, and changes in its tissue elements which indicate a process of inflammation, such as degeneration of nerve structures. There are three theories as to the formation of choked disc. One is that of Von Graefe,* that the circulation of the eye may be looked upon as the visible index of the condition of the intra-cranial pressure: that choked disc is simply a result of mechanical pressure. Hence the name *stauungs papilla*. *Stauung*—a damming back. The second was promulgated † by Benedikt in 1868. His theory is that some irritation is brought to bear on the sympathetic nerves, and that this irritation is propagated in some subtle way to the vaso-motor filaments which regulate the circulation of the disc: in other words, that the neuritis was one of abnormal innervation of the sympathetic system.

Schwalbe, ‡ in making investigations into the lymph spaces of the eye and optic nerve, found that by injecting fluid into the sub-arachnoid space of man, the fluid forced itself, under a moderate pressure, into the space between the outer and inner sheath of the optic nerve. § Schmidt, after further experiments, established the claim, therefore, that the fluid, when it arrived at the ocular end of the optic nerve, would occasion stasis of the circulation and all the phenomena expressed in neuritis or choked disc.—“*Etiology of choked Disc in Brain Disease*,” by Edward G. Loring, M.D., N. Y. *Am. Jour. Med. Sciences*, October, 1875, p. 361. With these theories we have nothing to do now. Association has been noted between certain diseases and choked disc, retinitis of different forms, hæmorrhages upon the disc or retina. I select and present some cases, for facts are more cogent than logic. Certain names are prominent among the investigators into this subject. I mention Dr. Thomas Clifford Allbutt, whose work “On the use of the ophthalmoscope in diseases of the Nervous System and of the Kidneys, also in certain other general disorders,” has always been, and is now, classic. So enthusiastic a writer is liable to claim too much for his speciality.

* “Arch. f. oph.,” VII. 1860, pt. 2, p. 55.

† “Elektrotherapie,” Wien, 1868, p. 249.

‡ M. Schultze’s Archiv. Bd. VI, 1869.

§ Bd. XV, 2, 1869.

I therefore select clinical cases for the most part. Dr. W. R. Gowers of the University College, London, is the most recent writer. His work, "A Manual and Atlas of Medical Ophthalmoscopy," besides being recent (May, 1879), bears evidence of candor on the part of its author, and is more striking because it is the result of medical work alone. Dr. Hughlings Jackson, perhaps the greatest living authority on diseases of the nervous system, has done very much to advance the detection of disease by the ophthalmoscope. I mention these names that they may add weight in convincing any one of the importance of this subject, if such thing was needed. The connection between albuminuric and syphilitic retinitis with Bright's disease and syphilis is so well established that it is worth while only to mention and call it to mind here. Dr. Morris J. Lewis, Assistant Physician to the Children's Hospital, Philadelphia, has given the results of his studies, in a paper read July 4, 1877, before the College of Physicians of Philadelphia, and published in their "Transactions," 3d Series, Vol. III, p. 175. In the cases given, of which I can select but one, the ophthalmoscopic examinations were made by Dr. W. F. Norris, the autopsies by Dr. Morris Longstreth. They show that a correct diagnosis would have been impossible without the ophthalmoscope; indeed that with that instrument mistakes previously made were rectified. The first case, in the service of Dr. James H. Hutchinson, was published in the *Philadelphia Medical Times* for May 8, 1875, as a case of supposed Menière's Disease. Catharine C., aged 42, an unmarried seamstress, first noticed pain at the top of her head in the autumn of 1873. This was thought at the time to be due to nasal catarrh. In the following June she began to lose her hearing, and in the course of a few weeks became almost absolutely deaf; the later symptoms were tinnitus aurium, unsteadiness of gait, pains in the limbs accompanied by impairment of sensation, vertigo, and occasional vomiting. In October, 1874, she was admitted into the hospital, and then a tendency to fall forward and to the right, and almost constant vertigo while erect, were noticed. Headache was a very marked symptom, and there was also nausea. No history of syphilis could be obtained, nor was the disease suspected. An ophthalmoscopic examination made soon after the patient's admission, showed the optic discs to be prominent and dull red in color, with fullness and tortuosity of the retinal veins, which plainly dipped over the edge of the disc, and marked striation of the retina, but no hæmorrhagic spots. Left

eye, fundus * $+\frac{1}{60}$, summit of disc, $+\frac{1}{16}$; right eye, fundus $+\frac{1}{40}$, summit of disc $+\frac{1}{20}$.

Upon this case Dr. H. remarks as follows: "If this pathological condition (alluding to Menière's disease), is really present, it is not sufficient by itself to explain the choking of the disc, which I believe is caused by some interference with the flow of blood within the cranial cavity," and he concludes by saying "at all events there is in the case a lesion different from that which is generally supposed to exist in Menière's disease, which I think could only have been discovered by the ophthalmoscope."

In March, 1875, the patient was discharged somewhat improved, but in April, 1876, again returned to the hospital, where she died on June 1st of the same year, under the care of Dr. J. Aitken Meigs. The patient had become deafer, particularly in the left ear, with headache, etc., as before. The urine became albuminous, but without trace of casts. Later symptoms were great dizziness, so that she fell upon the least attempt to walk, and increase of the old pain in the back and limbs, with at least complete loss of motion in the legs, while sensation was not entirely destroyed. At no time was there any facial paralysis, nor did she complain of impairment of vision, although she wore powerful convex glasses. The autopsy revealed two sarcomatous masses, one situated over the internal auditory meatus of each temporal bone, and that on the left entirely closing the jugular foramen on that side; the foramen on the opposite side was twice its normal size. There was marked ventricular dropsy, with consequent bulging of the infundibulum. The chiasm was softened, apparently as a consequence of pressure. Upon removing the posterior segments of the eyeballs, together with the optic nerves, the nerve-sheaths were seen to be considerably distended just behind the sclerotic, and the intra-cranial portion of the left optic nerve was flattened and somewhat softened. The left optic papilla was prominent, particularly upon the nasal side, and two arteries were seen curving over its edge: while in the right eye the papilla was prominent only upon the nasal side and the vessels were much more obscured, some being irregularly enlarged. Until the ophthalmoscopic examination had been made the original diagnosis satisfied all who saw the patient, and in addition it refutes the statement made by some

* Which means that while the fundus or back of the eye was best seen with a convex glass of 60 in. focal length, the summit of the disc was so swollen and projected forward that it was best seen with a convex glass of 16 in. focal length.

physicians, that a diagnosis of intra-cranial disease can never be made with the ophthalmoscope, unless it can be equally made without the employment of that instrument. As regards the frequency with which choked disc and atrophy occur in connection with intra-cranial tumors, Annuske, in Græfe's Archives, and Reich, in a Russian medical journal, report 92 cases verified by autopsy, in which optic neuritis or "atrophia-ex-neuritide" was found in 88 of the cases, being 95.65 per cent. "In looking over the medical journals from the year 1874, the date of Reich's report, to the present time, I have been able to collect only 31 cases in which ophthalmoscopic examination has been made, and in which the diagnosis has been verified after death: to these I add three cases observed in the Pa. Hospital, making 34 in all. Choking of the disc, or atrophy, occurred in 27 of these: in three there was redness of the disc or dilatation of the retinal veins, and in four the discs were healthy; adding these to the cases previously mentioned, we have a total of 126, in 115 of which choking or atrophy occurred—a percentage of 91.26." [See next page for table.]

In conclusion, Dr. Lewis says, "While believing that the ophthalmoscopic signs are of great value in forming a correct diagnosis of cerebral disease, I do not think that they have the transcending significance which Bouchut in his recent publications attributes to them; but I believe that they should always be considered in connection with the other symptoms, and that the physician who does not use the ophthalmoscope in these cases is neglectful of one of the most important aids in the elucidation of a most difficult subject."

A most striking case in all its connections is that of Wickham Powell. It was reported at the fifth International Ophth. Congress, in N. Y., Sept. 13, 1876, by Arthur Mathewson, M.D., of Brooklyn. I think it interesting enough to quote here in full. Wickham Powell was a colored coachman, 32 years of age, who had had choked disc $3\frac{1}{2}$ years, during which time he had been under observation without change in appearance or progressive impairment of vision. The sight of the right eye had begun to fail eight years before, and had diminished till there was little more than perception of light. About a year before he had sudden attacks of violent headache, with momentary loss of sight in the left eye. Ophthalmoscopic examination showed in the right eye partial cataractous degeneration; left eye, choked disc. Violent headache at intervals ranging from a few days to six weeks, accompanied with dizziness and sudden loss of muscular power; does not

TABLE OF THIRTY-FOUR CASES OF INTRA-CRANIAL TUMOR, IN WHICH OPHTHALMOSCOPIC EXAMINATION WAS RESORTED TO AS A MEANS OF DIAGNOSIS.

No.	OBSERVER.	CHARACTER AND POSITION.	CONDITION OF VENTRICLES.	CONDITION OF VISION.	CONDITION OF OPTIC NERVES, ETC.	REMARKS.
1.	Hughings Jackson, Med. Times and Gazette, Jan. 3, 1870.	Tuberculous mass in pons Varolii.	Ventricles and arachnoid space distended with fluid.	Diplopia.	Redness of Disc.	
2.	Id. Ibid., Feb. 7, 1874.	Medullary glioma in pons Varolii.	Ventricles distended with fluid.	Not mentioned.	Double optic neuritis.	Optic nerve sheaths distended.
3.	Id. Ibid., Feb. 28, 1874.	Right hemisphere.	Not mentioned.	Not mentioned.	Optic neuritis, left eye.	
4.	Id. Ibid., Feb. 28, 1874.	Right hemisphere.	Ventricles distended with fluid.	"Failure of sight."	Double optic neuritis.	
5.	Id. Ibid., Aug. 1, 1874.	Anterior convolution and both lobes of cerebellum.	Ventricles distended with fluid.	"Sight good."	Atrophy.	
6.	Id. Ibid., Oct. 24, 1874.	Glioma; mid. lobe of cerebellum.	Not mentioned.	Blindness.	Double optic neuritis.	
7.	Id. Ibid., May 1, 1875.	Middle lobe of cerebellum.	Not mentioned.	Not mentioned.	Double optic neuritis.	
8.	Id. Brit. Med. Journal, Mar. 21, 1874.	Glioma; fissure of Sylvius.	Not mentioned.	Impairment of vision.	Double optic neuritis.	
9.	Broadbent, Ibid., Feb. 28, 1874.	Glioma; right lobe of cerebellum.	Not mentioned.	Sight good.	Double optic neuritis.	
10.	J. Singleton Smith, Ibid., June 6, 1874.	Glioma; left hemisphere corpus striatum and optic thalamus.	Not mentioned.	Impairment of vision.	Commencing optic neuritis.	
11.	Ramskill, Med. Times and Gazette, May 23, 1874.	Cancer; anterior lobe of right hemisphere.	Not mentioned.	No diplopia.	"Optic discs healthy; veins too full."	
12.	Russell, Ibid., May 16, 1874.	Sarcoma of both hemispheres.	Not mentioned.	Impairment of vision.	Double optic neuritis.	
13.	Headland, Ibid., May 20, 1874.	Tubercle of cerebellum and middle oblongata.	Not mentioned.	Sight good.	Double optic neuritis.	
14.	Buzzard, Ibid., July 11, 1874.	Cerebellum.	Not mentioned.	Impairment of vision.	Atrophy.	
15.	Raymond, Gazette Med., June 18, 1874.	Middle lobe of cerebellum.	Not mentioned.	Not mentioned.	Optic discs normal.	
16.	Bull. Phil. Med. Times, May 15, 1875.	Cancer; at base.	Not mentioned.	Sight completely lost.	Optic discs normal.	
17.	Dreschfeld, Brit. Med. Jour., April 13, 1875.	Glioma; at vertex median line.	Not mentioned.	Not mentioned.	Double optic neuritis.	Vense, galem compressed.
18.	Russell, Ibid., Mar. 27, 1875.	Glioma of corpora quadrigemina.	Ventricles distended with fluid.	Sight lost.	Double optic neuritis.	
19.	Duffin, Ibid., June 24, 1876.	Glioma; Torcular Herophili.	Not mentioned.	Sight lost.	Double optic neuritis.	
20.	Dowse, Fatb. Soc., London, 1876.	Glio-sarcoma; anterior wall of corpus callosum.	Not mentioned.	Sight good.	"Dises bazy."	
21.	Id. Ibid., 1876.	Gliomatous tumor of left cerebral hemisphere.	Not mentioned.	Not mentioned.	Double optic neuritis.	Cavernous sinuses destroyed.
22.	Gowers, Ibid., 1876.	Sarcoma; anterior and middle fossae.	Not mentioned.	"Confusion of sight."	Double optic neuritis.	
23.	Hulke, Med. Times and Gazette, January 30, 1877.	Glioma; left lobe of cerebellum.	Ventricles distended with fluid.	Impairment of vision.	Right eye, optic neuritis.	Chiasma and nerve trunks normal.
24.	Fox, Lancet, Jan. 6, 1877.	Glioma; left posterior pole of cerebellum.	Right ventricle greatly distended.	Impairment of vision.	Left eye, choked disc.	
25.	Pooley, Arch. Ophth. and Otology, Vol. V., No. 2.	Inflammatory growth in right posterior lobe of cerebellum.	Left ventricles dilated.	Impairment of vision.	Congested disc, with hemorrhagic spots.	
26.	Habershon, Guy's Hospital Reports, 3d Series, Vol. XX., 1875.	Tubercular masses in left side of pons and cerebellum.	Not mentioned.	Impairment of vision.	Optic neuritis.	
27.	Id. Ibid., 1875.	Sero-cyst of cerebellum; median line.	Ventricles much dilated.	Total blindness.	Choked disc.	Optic nerve sheaths distended.
28.	Id. Ibid., 1875.	Sarcoma of cerebellum.	Ventricles much dilated.	Impairment of vision.	Choked disc.	
29.	Norris, Amer. Oph. Soc., July, 1874.	Glio-sarcoma; front left convolution.	Ventricles much dilated.	Not mentioned.	"Retinal vessels somewhat dilated."	
30.	Dentian, Arch. Gen. de Med., Dec., 1876.	Posterior part of corpora quadrigemina.	Ventricles much dilated.	Not mentioned.	Double optic neuritis.	
31.	Kohls, Virchow's Archives, Bd. LXVII.	Fibroma-sarcoma of both middle lobes and left hemisphere.	Ventricles much dilated.	Not mentioned.	Choked discs.	Optic nerve sheaths distended; left jugular foramen closed.
32.	Hatchinson, present paper, No. 1, p. 175.	Tubercles, right and left hemispheres, and right lobe of cerebellum.	Small amount of serum in ventricles.	Occasional dimness of vision.	Choked discs (found post-mortem).	
33.	Id. Ibid., No. II., p. 177.	Sarcoma of cerebellum.	Small amount of serum in ventricles.	Not mentioned.	Dises normal.	

lose consciousness, no paralysis nor derangement of sensation, special senses unaffected, intellect unimpaired, occasional nausea, no specific history, urine normal, appearance that of a man in good general health, and is able to follow the occupation of driving a carriage. "I have regarded the case," says Dr. Mathewson under this date, (Sept. 13, '76), "as one of tumor of the brain. So far as my knowledge goes, no record exists of any case of choked disc so long under ophthalmoscopic observation, without change in appearance or progressive impairment of vision. This case has a singular and interesting sequel. I quote from the record made Dec. 15, 1876, and reported as above. Proceedings, p. 65. The Brooklyn theatre was destroyed by fire Dec. 5, 1876, and nearly three hundred lives were lost. The second day after, Doctors Shepard and Segur of Brooklyn, were requested by the coroner, Dr. Simms, to make some post-mortem examinations in order to determine, if possible, the precise method of death—whether by suffocation or from burns. From among the great number of disfigured and unrecognizable remains with which the Morgue was crowded the body of a man was taken at random for that purpose. On examining the brain, greatly to their surprise they found a pedunculated cystic tumor about the size and shape of a human eye, lying in the left middle cranial fossa, to the outer side of the cavernous sinus. The dura mater was thin and eroded at the point where the cyst had evidently rested upon it, and thickened and in a state of chronic inflammation around the eroded portion. The bone was roughened below the eroded portion of the dura mater. The point of attachment of the tumor it was found difficult to determine, as it had been cut away in removing the brain before the growth was noticed. The cyst was filled partly with a fluid of the consistence of the white of an egg, and partly with a cheesy mass. My patient was among the missing, and the clue afforded by the accidental discovery of this tumor led to the identification of his remains, Dr. Simms and Dr. Shepard, who made the official post-mortems having been requested by me long before the fire to examine for brain tumor in case his sudden death came to their knowledge. The identification was made complete and positive through the examination of the remnants of the clothing by his friends, and by other circumstances."

On the other hand, there may be symptoms of brain disease without any cerebral lesion, defective vision or ametropia being the sole disturbance. Here the ophthalmoscope is equally as good

in discovering the cause. A case the antipodes of Powell's has furnished Dr. Brudenell Carter much cause of boasting over the profession of which he has taken the fullest advantage. He has referred to it in his work "A Practical Treatise on Disease of the Eye," p. 480, has reported it in all its details in "Transactions of the Clinical Society of London," Longman, Green & Co., publishers, Vol. viii, p. 12, and again in his very recent book, "Eyesight; Good and Bad," from which it appears in the *London Times* in a two column article on the notice of the book. After reading it the members of this society may look to the condition of vision in many cases instead of trying to relieve headaches by physic, morphia, or even a bromide. And just in this connection the conclusions of Dr. S. Weir Mitchell, whom we may all be glad to follow, are very much to the point. In an article on "Headaches from Eye-strain," published in the *Am. Jour. Med. Sciences*, April, 1876, p. 363, he emphasizes this subject as follows: "My consultations have plainly enough taught me that hardly any men in the general profession are fully alive to the need of investigating the eye for answers to some of the hard questions which are put to us by certain head symptoms, since many of the patients treated successfully by the correction of optical defects never so much as suspected that their eyes were imperfect. He lays down and substantiates by citing nine interesting cases, mostly in his own practice.

1st. That there are many headaches which are due indirectly to disorders of the refractive or accommodative apparatus of the eyes. 2d. That in these instances the brain symptom is often the most prominent, and sometimes the sole prominent symptom of the eye troubles, so that while there may be no pain, or sense of fatigue in the eye, the strain with which it is used may be interpreted solely by occipital or frontal headache. 3d. That the long continuance of eye troubles may be the unsuspected source of insomnia, vertigo, nausea, and general failure of health. 4th. That in many cases the eye trouble becomes suddenly mischievous, owing to some failure of the general health, or to increased sensitiveness of brain from moral or mental causes." Doctor Mitchell suggests how we may easily detect near or far sight by the perforated test-discs of Doctor (now Professor) Thomson.

To return again (for I have made a digression) to the subject of choked disc. Doctor Seguin declares it to be a symptom common to all lesions of the basis cerebri, but produced at times by any intra-

cranial disease which causes pressure. It is one of the most important signs of gross encephalic disease, especially of tumors, as will be seen from the table given. The intra-ocular symptoms of progressive locomotor ataxy may precede all the other symptoms, and often do by months and even years, remaining for an indefinite period completely isolated, and the diagnosis of not a few cases of suspected ataxy has been facilitated by the ophthalmoscope which showed a commencing atrophy of the optic nerves. Of course in these cases the same process of sclerosis exists in the brain. The process from beginning to end is the same as occurs in the spinal cord itself. (Bull, *Am. Jour. Med. Sciences*, July, 1876, p. 65.) Charcot states that a large majority of the women in the hospital of La Salpêtrière affected with amaurosis present sooner or later symptoms, more or less manifest, of ataxy. In examinations of the optic nerves of patients who had died of ataxy the alteration appeared as a gray induration resembling that in the spinal cord.

A case of disease where no positive diagnosis could be made without the ophthalmoscope occurred in the practice of Thomas Buzzard, M.D., who reported it in a paper read before the Clinical Society of London, May 10, 1878, and published it in their "Proceedings," Vol. XI, p. 205. There was imperfect right hemiplegia, with slight aphasia, double optic neuritis, and temporary obliteration of the right brachial artery. Dr. Buzzard says, "When I first saw this girl in the consulting-room I was disposed to regard the case as one of hysteria. Thanks to the ophthalmoscope, the matter was left in no doubt. The patient was evidently suffering from some coarse disease, probably tumor of the brain, for she had well-marked optic neuritis in each eye."

Cataract in its incipiency can be detected only by the ophthalmoscope. Premature cataract is a cause of suspicion of constitutional disease. Increasing dimness of vision brings many a patient to the physician before any other symptom is noticed. If the practitioner is familiar with the use of the ophthalmoscope he may detect the striae in the lens, and may thus be enabled to take the disease in its incipiency. "If peripheral striae are present in the lenses of a patient of sedentary habits, who consumes more food and more alcohol than he requires, and whose excretory organs are overtaken by waste which they cannot eliminate, there can be no doubt that under the influence of a suitable diet and regimen such a person may preserve his eyesight, just as he will preserve his life, longer than if he continued in his unphysiological

courses. And, therefore, when we see cataract in an early stage, and when we do not find any obvious morbid condition, such as diabetes, the next thing should be to try and discover what there is wrong in the mode of living of the individual, what there is that physiology or common sense would seek to alter in his daily conduct, and why it is, in all probability, that he is no longer repairing the tissues of his crystalline lens in a proper manner. And here the case falls altogether out of the domain of the nerve specialist into that of the physician, and the commencing cataract should be regarded not only with reference to its effect upon the function of seeing, but also in a wider and more general way, as an evidence that senile change has made at least one serious inroad upon the system."—*Brudenell Carter*, p. 312.

In looking at the vessels of the retina we have the only opportunity of seeing an artery in its natural condition, the blood coursing through it; it is a means more or less reliable of determining the condition of the general arterial system. Thus fatty degeneration of the vessels is a common occurrence in albuminuric retinitis. Wedl, in his "Pathological Anatomy of the Eye," depicts calcareous degeneration of the capillaries, and a number of writers have described aneurismal dilatations of the retinal vessels seen by the ophthalmoscope.—*Martin and Galezowski*. Retinitis apoplectica may be said to be a result of minute and often multiple embolisms of the retinal arteries.—*Noyes*. The association between retinitis apoplectica and cerebral apoplexy is notorious. Heart disease may first be noticed in this manner, as instance a case given by Dr. Noyes.—*Am. Jour. Med. Sciences*, Oct., '77, p. 363. "S. H., aet. 50, from New Jersey, came to the N. Y. Eye and Ear Infirmary on June 22, 1877. He has had several attacks of rheumatism within fourteen years. On the 9th of April last had a severe rheumatic pain in the right knee, and two days afterward when he awoke in the morning he found the left eye much obscured. For a month he could not distinguish either light or color. Gradually the sight improved, and now he counts fingers in the upper part of the field. Whether his loss of sight were really so complete as he says may be doubted. There were no other symptoms. The heart showed signs of dilatation, but not of valvular disease nor of hypertrophy. The optic nerve is well defined, pallid, and in a state of white atrophy; the vessels of usual size and distribution, except those going upwards, which have almost disappeared. Both arteries and veins are reduced to

threads. Alongside of one of these up-going remnants of vessels is an irregular granular mass, which looks like the vestige of an exudation or clot. It is decolorized, narrow, and about one and one-half nerve diameters long. This mass and the shrunken vessels seem to me to point to the occurrence of embolism, while the signs of neuro-retinitis are the natural consequences of this condition. No other supposition seems to me capable of accounting for the appearances." Mr. Gowers (op. cit.) is the authority for the following: The veins and arteries of the retina participate in any general changes in the circulation which result from disease of the valves and walls of the heart, although (for certain reasons) the changes in them are commonly less marked than those in other vessels. (p. 180.) In simple chronic anaemia the fundus is pale in proportion to the general anaemia. (p. 188.) In pernicious anaemia the tint of the fundus and the appearance of the arteries and veins are such as are seen in the most intense cases of simple anaemia; of sixteen cases examined by Quinke retinal hemorrhages were absent in one only. (p. 189.) In Leucocythaemia, purpura, scurvy, diseases in which the changes in the blood are considerable, the vessels are pale or ruptured. The gray granulations which constitute the anatomical lesion in tuberculosis may form in the vascular structures of the eye, chiefly in the choroid, rarely in the iris and retina. When present in the fundus they may readily be seen with the ophthalmoscope, and it is the only situation in which the isolated granulations can be seen during life. That tubercles occurred in the choroid as a post mortem observation has long been known. They were discovered by Autenreith in 1808. They were first observed with the ophthalmoscope by Ed. Jäger in 1855.—*Gowers*, p. 198

It is possible in the limited space allowed only to outline a subject so great and so growing. Allow me to say in conclusion that if I have furnished a new subject of thought to one member of this society, if I shall succeed in giving a new impulse to study, to investigate, if anything herein may in some way help to profit the great profession to which we all belong, my labor of love will be satisfied.

ESSAY.

FUNCTIONAL DISORDERS OF THE NERVOUS SYSTEM.

J. B. KENT, M.D., PUTNAM.

In these high-pressure times, prostration from loss of nerve-power is a very common disease; it is, in fact, the complaint of modern life. It prevails more or less in all classes of the community; but it is most frequently found among those engaged in professional, scientific, or literary pursuits, and those engrossed in commerce or by mercantile speculations. It is constantly met with also in what is called fashionable life, and amongst those having nothing to do, as well as those who live in an atmosphere of perpetual nervous excitement and pleasure-seeking, involving incessant activity of heart and brain. Growing boys and girls, students and scholars, whose mental powers are unduly stimulated and spurred into action by keen competitive struggles, are also frequent subjects of this complaint. Of all the parts which go to make up the "wonderful whole of the human body," says an eminent medical writer, "there is none to which a deeper and more mysterious interest is attached than to the nervous system. By this we think and move and have our conscious being; by this we are linked with the outer world, and are capable of affecting and being again affected by the persons and things around us. By this our immaterial acts upon and sways our material part: and by the higher development of this, and its capability for higher actions, man is especially distinguished from the lower creation. All the passions and emotions, all the intellectual efforts, all the perceptions and recollections operate through and on this system." If this be so, is it any wonder that exhaustion should so frequently befall this complex machinery, or that its disorders

should be among the most frequent that our fallen nature is doomed to bear? We can see that even under the most favorable circumstances, the nerves must often be severely taxed; how much more, then, will this be the case when sorrow, toil, and anxiety predominate?

Overwork and *fast living* are among the chief factors inducing *loss of nerve power*; and by fast living, we refer more particularly to that too frequent custom of living in a hurry, amid scenes of constant excitement, so common at the present day. The destructive tendencies of this mode of living, and the manner in which it induces disease, is ably described in the following passage taken from Mr. W. R. Grey's lecture on "Life at High Pressure": "The physical consequences of this needless hurry are grave enough; the moral consequences are possibly graver still; though both sets of effects are as yet only in their infancy, and will take a generation or two fully to develop."

The rapidity of *railway traveling* produces a chronic disturbance in the nervous system, and the anxiety to be on time, the hurrying pace, cause a daily wear and tear, as well as accelerated action of the heart, which kills or injures thousands. The constitutions which are thus enfeebled and impaired we transmit to our children, who add to and pass on the sad inheritance. Heart disease, too common already, will be more common still. We are perhaps most of us conscious, at times, of the need to be quiet and alone, but few of us estimate adequately the degree in which an atmosphere of excitement, especially when we enter it young and continue in it habitually, is fatal to the higher and deeper life; how it saps solidity and strength of mind; how it daily becomes more necessary, and in increasing measure; how it enfeebles and renders abnormally sensitive the subtle organization of the brain; and how far, by slow and sure gradations, it carries us on toward a mental and moral condition which may justly be pronounced unsound. But "high pressure" is shown even more in our style of work than in our rate of movement. The world is more exacting in its demands. Success in professional, public, and commercial life demands more strenuous and exhaustive toil, sterner concentration of the mind, and a more harsh and rigid sacrifice of the amenities which time offers the easy-going, than was formerly the case. The eminent lawyer, the physician in full practice, the minister, and the politician who has any aspirations, even the *literary workman* and eager man of science are now condemned to an amount

and severity of exertion which forces one after another to break off in middle life, shattered and reduced to premature inaction or senility. What work does for the learned professions, anxiety does for the merchant and the manufacturer. Men who have given up their entire being to this business labor, often lose capability of a better life, all relish for recreation, all true enjoyment of leisure when it comes at last; for the faculties of enjoyment, like all others, are apt to grow atrophied with disuse, and so the successful man too often, with much to retire upon, has nothing to retire to. This ceaselessness and severity of toil gives the prizes of life to the few—those of exceptional physique.

This may to many appear to be a startling and overdrawn picture of the battle of human life; but truth and experience compel us to admit it to be a faithful one.

Besides the two great factors mentioned above, viz., *overwork* and *fast living*, there are other causes which tend towards nervous depression or loss of nerve force; the most detrimental is perhaps defective hygiene—living over damp cellars, in close and confined neighborhoods, in illy-constructed houses, affording an insufficient supply of air and sunlight, and we may add to this bad drainage and defective ventilation. Conditions of this kind exist in all large and crowded cities. The blood of those surrounded by these influences becomes impoverished and imperfectly decarbonized, the nutritive processes are imperfectly performed, secretion and excretion are interfered with, and vitality fails. It must be manifest that, should defective sanitary arrangements be superadded to overwork, as is so often the case, the nervous system must be more rapidly lowered in tone. It is not infrequently under these circumstances that men are driven to intemperance in order to spur up the flagging energies of heart and nerve—a practice which only hastens and renders more inevitable the final collapse.

We are told that diseases have undergone a change within the past half century. The profession well knows that the treatment of diseases to-day is very different from that of years ago. For instance, acute diseases, especially when they occur in large and crowded cities and neighborhoods, which were formerly treated successfully by the lancet and other depletory measures, now assume a low type, and yield only to an opposite plan of treatment, viz.: tonics, support, and stimulation. Now is it, we may ask, because disease has changed, or is the answer not rather to be found in what we have stated above—in a debilitated state of the

physical system of the present generation? It would not be difficult to show that many functional derangements with which the physician has to deal, affecting the vital organs, and which bear a variety of names, are almost wholly due to a deficiency of power in the organic nervous system. "It is difficult to form a decided opinion on this matter; but there seems, I think, reason to entertain the belief that failure of nerve power is much more characteristic of disease of the present day than it was fifty years ago. Whatever the exact truth may be, whether the type of disease is altered or not, I hold it to be abundantly clear that the great majority of disorders that we have to treat at the present time show more or less marked indications of failure of nervous power; and I believe it to be a matter of great practical moment to keep this steadily in view."

How, it may be asked, is a man to know when he is living beyond his powers of endurance? When his work, be it mental or physical, or both, is injurious, how is he to know that this is the case? The answer we think is when our daily routine of business is followed by fatigue, which is not removed by a night's rest; when forgetfulness becomes frequent, and the affairs of the day pursue him at night; when rest is disturbed by the occupation and cares of business; and when after restless sleep he awakes unrefreshed to resume the duties of the day. Wakefulness is always a suspicious symptom; when a man works hard he should sleep soundly. Nervous indigestion, described under various appellations, is one of the most common manifestations of loss of nerve power, and it is, perhaps, the most common form of dyspepsia.

The processes of digestion and assimilation are almost wholly under the influence of the nerves of organic life, and when from any cause these centers of nervous force are enfeebled want of tone is at once manifested by all the important functions involved. It is well known that digestion is largely influenced by the state of the mind at the time food is taken, by sudden emotions and passions, or great anxiety of mind; the natural secretions are sometimes suddenly interrupted and digestion wholly arrested, leading to nausea and rejection of food taken.

Neuralgia.—This affection, when not directly the result of some physical cause interfering with the nerve in which the pain is situated, is almost invariably due to a depressed state of the nervous system. Its very existence must be received as an evidence of deficient physical stamina and that the nervous system is not duly

nourished. The remote factor may be malaria, syphilis, rheumatism, gout, or any other cause capable of devitalizing the organism, and as a consequence that of the nerves.

Hysteria.—"The hysteric state," says Dr. Russell Reynolds, "is essentially one of mental perturbation, and it is brought into existence, if not inherited, by those conditions which are most active in producing disorder of the mind; in the male sex by worry, anxiety, over-work, late hours, accidental injuries, and dissipation; in the female sex by emotions, want of sympathy or success, disappointed or concealed affection, want of occupation, fear, and morbid, or supposed morbid, conditions of the reproductive system. It would appear that the nutrition of the whole nervous system is changed, but that change is beyond our power of recognition, except in its physiological or pathological effects. We can witness the effects of such morbid processes in movement, in secretion and nutrition, and we observe some of the ultimate results of such changes in emotion and sensation." So we might go on and include under this head epilepsy, vertigo, cerebral softening, and many of the various forms of skin disease.

Treatment.—Upon this part of our subject we shall have but little to say. The first thing, of course, to be done in the treatment of nervous diseases is the discontinuance of all injurious habits, and all practices that tend to depress nervous force. Laborious or excessive mental work should be lightened. Open air physical exercise should be increased. Long railway journeys and hurrying to and from business should be discontinued. Diet should be carefully regulated, and should be of a very nourishing character. Dr. Mitchell says, "the mental attitude of the nervous demands of the physician the most careful attention, nor can we afford to disregard anything in his ways of life, or his habits of thought and action. We must determine for him how free and how much he must use his mind, whether or not he must continue his work, and what his amusements should be. The careful student of such cases will find in the individuality of his cases need for the most minute of such studies, and above all he will learn that the more fully he commands the confidence of his patients the more can he accomplish. A large part of the treatment of nervousness must, of course, resolve itself into the treatment of *anaemia*, of defects of nutrition, of mal-assimilation. The nervous condition will be due to this or that cause, but after the cause has been removed there will still be left the anaemic state, and in

some people that is strangely intractable: therefore, the calybetic tonics comprise a very important part of the medication, and to this we may add, as equally important, *nux vomica*, and the *phosphates*. Besides these means we have other agents, the careful employment of which is of essential value. First among these is, perhaps, the proper use of *water* in its various forms of application, and we think a far too much neglected therapeutic aid.

ESSAY.

“CHRYSOPHANIC ACID AS A REMEDY IN DISEASES OF THE SKIN.”

BY CHARLES JAMES FOX, M.D., WILLIMANTIC.

It will be the aim of this paper to call the attention of the profession to the special therapeutical application and the beneficial and satisfactory results obtained from the use of chrysophanic acid in certain varieties of skin disease. For some time past I have made use of the drug, not only in psoriasis, but also in various other affections of the skin; and I am led to believe, from my experience in the matter, that the uses of the drug are of the highest therapeutical importance, and that it is capable of being made of greater practical benefit to the profession than ever before. Chrysophanic acid is obtained from a tree, which grows in Bahia, Brazil, known as “angelina amargosa,” or bitter angeline. From this a powder is obtained known as “Goa Powder,” which contains nearly eighty-five per cent. of pure acid.

The first notices of the drug appeared in “Fox’s Skin Diseases of India,” published in London in 1876. Since then various other articles have appeared. Dr. Henry G. Piffard of New York, in an article published in the Archives of Dermatology, in 1877, Dr. WHIPMAN, of St. George Hospital, in the Medical Times and Gazette, September 22, 1877, and Dr. BALMANNO Squire of London, in the same Journal of February, 1878, have referred more fully to the subject, and advocated its special efficacy in psoriasis.

The true action of the drug does not yet seem to be definitely known, but it is clearly demonstrated and proven that it will destroy both animal and vegetable parasites. Furthermore, it is some-

what remarkable, that what would seem to be no more than a common irritant should possess so peculiar and specific a virtue in certain cutaneous disorders. Some practitioners antagonistic to its use say that it produces an eczema, and indeed it does, but in this very fact seems to reside its virtue. In children who suffer from this class of affections it is specially useful. At Victoria Hospital children suffering from eczema were successfully treated by the use of this drug, and yet remedies of an irritant nature are prohibited in the treatment of these affections. From some fourteen cases of eczema successfully treated, I will relate the result I obtained in a case of several years' standing :

November 28, 1879, a lad twelve years of age presented himself at my office for treatment. The eruption had been present for a period of three years; on examination the eruption was noticeable as appearing in a very copious manner on the scalp and forehead, and to a lesser extent on the lower extremities. As the case was an exceedingly obstinate one, I commenced using ℥ss, of the acid to the ℥i of vaseline, to be applied morning, noon, and night.

December 4th. Some improvement in the case. The eruption on the lower extremities was much improved, but that of the scalp remained about the same; I now ordered forty grains of the acid to the ℥i.

December 16th. The eruption had now nearly all disappeared, but certain portions of the affection, *i. e.*, the circumferential part of a good many of the patches proved to be exceedingly obstinate, but I increased the acid to ℥ii to the ℥i, and ordered it continued.

One week later he presented himself as entirely cured. The patient experienced some alarm from the temporary yellow discoloration of his hair from the use of the ointment, but this was readily removed by the use of a weak solution of caustic potash.

In psoriasis the efficacy of the drug is certainly one of the most astounding facts in modern therapeutics.

Dr. ALBERT FENN reports a case of nine years standing in a lad of thirteen years of age, whose body was entirely covered, where he used from fifty to sixty grains to the ℥i of lard, and after one month's persistent application, the case was fully cured. In a number of cases of psoriasis I have used from ℥i, to ℥iis to the ℥i of vaseline. The following case fully illustrates the therapeutical value of the drug in the affection.

Mrs. A., aged thirty-five, came under my care in November 27,

1879; she had been affected with psoriasis some three months; the skin of the limbs and body was copiously covered. The patches on the anterior and posterior surface of the arm especially were of large size, those on the forearm being the largest of all; there were also two or three patches noticeable on the face.

December 1st. I commenced to treat the case with phosphorus $\frac{1}{30}$ grain pill three times a day.

December 2d. I increased the phosphorus by giving two pills three times a day.

December 10th. The patient complains of some severe pain about the epigastrium after each administration. I reduced the pills to one pill three times a day.

December 11th. Some slight improvement.

December 21st. The scales to the largest patches had disappeared, and the larger patches seemed somewhat improved in appearance. The smaller patches were also entirely gone. Since December 10th she had only taken one pill per day. She was now placed on two pills three times a day.

December 22d. She had now taken six doses, when she complained of pain about the epigastrium. I reduced the dose to one pill three times a day.

December 29th. The additional patches had not disappeared, but the eruption was much fainter. I placed her again on two pills three times a day.

January 10th. Since December 29th she had taken two pills three times a day until now. The patches on the body were almost gone, *i. e.*, could no longer be identified. Those very large patches on the forearm were entirely absent, being free from desquamation, and having left only at the actual margins a slight blue stain. The patches on the lower extremities, and also on the abdomen, had undergone the least alteration, but had lost their scales. No pain about the epigastrium; she was now ordered to bathe thoroughly every night and morning, so that the action of the phosphorus on the removal of the scales could be observed. She was also placed on three pills, $\frac{1}{30}$ grain, three times a day.

Jan. 14th. The patches on the thighs and abdomen were broken and simply dotted, and the general condition of the eruption was much more copious, and on the back a few fresh spots had appeared. No inconvenience from the pills. She was placed on four pills three times a day.

Jan. 22d. She had now taken four pills three times a day for

eight days, when severe pain about the epigastrium came on, with diarrhœa. From the time I discontinued the phosphorus the eruption did not seem to have varied much, and fresh spots had broken out copiously along the knees and elbow. I was now forced to believe I had attained the maximum effect of the phosphorus, or nearly so, perhaps; it was much slower in its effects than efficient local applications generally are. I then discontinued the phosphorus, and ordered chrysophanic acid ointment, 40 grs. to the $\bar{3}i$.

Feb. 1st. Very much improvement. The traces of the eruption were slightly apparent on the abdomen and chest and back, but more so on the nates and lower extremities.

Feb. 7th. Nearly all the traces of the eruption had disappeared, with the exception of on the knees and nates. They were traceable by faint stains.

Feb. 13th. She has used the ointment steadily since the 7th, after washing twice a day the skin with Castile soap and water. No inflammation had resulted from them, and there was not any trace of the eruption. The conclusion deduced from the case is that after a certain time the antagonism of phosphorus to psoriasis finds its equilibrium, and that the antagonism in question, although real, has nevertheless a limit, which falls short, however, of a complete cure; and as to the value of chrysophanic acid, it seems to act with special efficacy in this class of affections.

I have also used the drug in six different varieties of herpes, circinatus, or ringworm. The following case, although an exceedingly obstinate one, shows the peculiar effects of use of the drug:

In November, 1879, a lady, 28 years of age, was affected with a strange eruption, in which the clusters of vesicles began near the spine on the neck, passed over the scapula, then to the shoulder and axilla, whence the main line ran along the outer side of the upper arm till it reached the elbow, when it turned inwards, followed the inner side of the forearm, went across the palm of the hand, and terminated by two or three patches upon the palmar and inner side of the ring finger. I at once ordered the ointment, $\bar{3}ss$ to the $\bar{3}i$, on Nov. 8th, to be applied morning and night.

Nov. 15th. There was some improvement in the case. I increased the strength of the acid 40 grs. to the $\bar{3}i$.

Nov. 22d. The patient was discharged at this date, wholly cured.

Dr. H. R. Crocker reports a case successfully treated (in the

Pharmaceutical Journal, October, 1876), of very long standing, where he used an ointment of the acid prepared in the form of a concentrated solution of benzole.

I have found it also especially valuable in a case of sycosis, which I will relate.

Mr. M., a young man, aged 22, of very nervous temperament, applied to me the 22d of November, 1879, with the following history: Some five weeks since he contracted the disease in a barber shop in a neighboring city, and for three weeks past had been under treatment elsewhere, but with very little, if any, improvement.

He was very much discouraged, and had lost weight, also suffered from loss of sleep and appetite. On examination, the disease was mainly confined to the parts covered by the beard, whiskers, and moustache, and was accompanied in some cases by inflammation, induration, and in some by suppuration. There were characteristic pustules, small, acuminated, and a hair was found in the center of each. There were also numerous scabs. The scabs and pustules were the most numerous on the left side and under the chin. When the hairs were extracted they looked as if covered with a whitish powder. I at first used the benzoated oxide of zinc ointment, then the sulphur, which resulted in very little, if any, improvement. I at the same time had the case on strong tonics, which improved the general condition very much.

Dec. 10, 1879. As a last resort, I used the chrysophanic acid, 25 grs. to the \mathfrak{z} i, and also ordered epilation.

Dec. 12th. The change was highly satisfactory, the improvement being most marked where the hairs were pulled out.

Dec. 28th. The patient was discharged, completely cured. The action of the acid would seem, especially after epilation, to enter the pustules, and thus strike at the root of the disease. The contents of the pustules are almost instantly converted into a white crisp, and doubtless the offending parasite is destroyed. It also seems to diminish the irritation of the parts. In fact, in this case it accomplished all that could be desired, bringing about a successful result in less than three weeks. This seems to open a new field for the use of chrysophanic acid, hitherto neglected.

I have also obtained excellent results in a number of cases of "aene rosacea." I will cite the following as demonstrating its efficacy:

Miss A., a brunette, of sturdy build and hearty appearance, aged

32, had been affected for twelve months with this cutaneous disorder; had enjoyed good health always, but her face was her only misfortune. This region presented a series of tubercles about the size of split peas about the cheeks and forehead, while in the region of the skin of the neck which lies under the base of the lower jaw presented smaller tubercles. I commenced treatment with the ointment, ℞i to the ℥i, and ten days later used 40 grs. to the ℥i. One month from the time she commenced treatment she was pronounced cured. In this and similar cases no bad results accrued from the use of the drug on the face, except the face was a little swollen and puffy at times, but this all disappeared in a few days. In favus, in ringworm of the beard, I have used the acid with unsatisfactory results. There is one point—the discoloration of the skin from its use—a phenomenon which often occasions alarm to the patient. Generally about the third or fourth day after the continued use of the drug, the surrounding part, about four inches beyond the margin of the parts where the ointment is applied, becomes copper-colored, but in two or three days after the discontinuance of the treatment assumes its pristine appearance, thus demonstrating that the remedy possesses powerful detergent properties.

Finally, the true value of chrysophanic acid in skin disease is a question to be determined not by the results obtained in a certain number of cases, but by the general verdict of the profession.

OBITUARIES.

EDWARD BRACE, M.D., WEST HARTFORD.

Edward Brace was born in the year 1798 in West Hartford, where he long lived and practiced his profession. He graduated at the Medical College at Castleton, Vt., in the year 1828. He was at one time an assistant physician at the Retreat for the Insane at Hartford. He died November 27, 1879, aged eighty-one years.

BENJAMIN HOPKINS CATLIN, M.D., MERIDEN.

By A. H. CHURCHILL, M.D., MERIDEN.

Dr. Benjamin Hopkins Catlin died at his residence in this city February 18, 1880, in the 79th year of his age, after an illness of about two and one-half years of Bright's disease of the kidneys.

The subject of this notice was born in Harwinton, Litchfield county, August 10, 1801. His early education was received at the public school and academy in his native place. His medical studies were also commenced there under the instruction of the practicing physician of his own and an adjoining town, and were continued at the Medical Department of Yale College, where he attended lectures in the winter of 1824, and received his license to practice medicine and surgery from the Conn. Medical Society in the spring of 1825.

In July of the same year he commenced practice in Haddam, where he remained until 1842, when he removed to Meriden, where he continued to reside until the time of his death, being held in high esteem by his townsmen for his honesty and integrity of purpose and true Christian character.

He had quite a large practice, especially in the first twenty years of his residence here; for the last few years he had gradually withdrawn from very active work.

Dr. Catlin was well known by members of the profession in his own State, and also by those in other States who are in the habit of attending the meetings of the American Medical Association.

In 1840 he received the honorary degree of M.D. from Yale College. He was a member of the Meriden City Medical Association, the New Haven County Medical Society, the Connecticut Medical Society, and a permanent member of the American Medical Association since 1856. In 1860 he was elected honorary member of the New York State Medical Society; in 1869 a corresponding member of the Gynaecological Society of Boston. He was also an honorary member of the California State Medical Society, and a member of the Rocky Mountain Medical Association. Doctor Catlin was many times elected a Fellow of the Connecticut Medical Society; was Vice-President of the Connecticut Medical Society in 1854-5, was elected President in 1856, and re-elected in 1857. He was Vice-President of the American Medical Association in 1873, and President of the Rocky Mountain Medical Association in 1874.

This society is made up of all those who attended the session of the American Medical Association beyond the Rocky Mountains in California.

He made addresses and read papers as follows: an address before the Connecticut Medical Society in 1857-8. In 1865 a report to the American Medical Association on Typhus Synochia. In 1876 a report to the Connecticut Medical Society on Drainage and Sewerage.

Dr. Catlin filled the office of director of the Home National Bank from its incorporation in 1855 to the time of his death. He also held the position of Senior Deacon in the First Congregational church in this place from the time of its organization in 1848 till his death.

Dr. Catlin leaves a wife and one son, another son having died nine years ago. His funeral, which was attended by members of the Meriden City Medical Association, took place Feb. 20th.

The following resolutions of respect were passed by the Society here, of which he was a member:

IN MEMORY OF DR. CATLIN.

At a special meeting of the Meriden City Medical Association, held at the residence of Dr. Churchill, Feb. 18, 1880, the following preamble and resolutions were unanimously adopted, viz.:

Whereas, It has pleased Almighty God to remove by death from our midst our honored and esteemed friend and associate, Benjamin Hopkins Catlin, M.D., for thirty-eight years a practitioner of medicine in this town, and a member of this Association from its organization :

Resolved, That we desire to present to the family of our deceased brother, and to the profession which he so long adorned, our united testimony to his Christian worth and professional integrity.

Resolved, That this Association desires to express and place on record its warm appreciation of the loss it has sustained by this bereavement.

Resolved, That his long life of usefulness and fidelity to truth shall be an incentive to us to so order our lives that, like his, they shall be a rich legacy to those whom we leave behind.

Resolved, That a copy of the above preamble and resolutions be sent to the family of the deceased, be recorded on the minutes of the Association, and be published in the local papers and medical journals.

N. NICKERSON, M.D., *President*.

E. T. BRADSTREET, M.D., *Secretary*.

ROSWELL FOX STILLMAN, M.D.

BY R. B. GOODYEAR, M.D.

Roswell Fox Stillman, M.D., the third son of George W. Stillman and Phœbe H. Fox, was born in Cooperstown, Otsego County, N. Y., December 6, 1815, and died in North Haven, December 21, 1879, aged 64 years and 15 days.

Previous to his study of medicine his attention was engaged in civil engineering, and he was one of the party who surveyed the Erie Railroad.

He commenced the study of medicine with Dr. Harper of Cooperstown, N. Y., in 1840, and attended lectures at Albany Medical College during the term of 1841 and 1842. He attended lectures at the University Medical College of New York, and graduated in that institution March 15, 1843.

He commenced the practice of medicine in Cooperstown and Burlington, N. Y., in the Spring of 1843, where he continued to reside and practice until he removed to North Haven, January 1, 1851. Here he was engaged in the duties of his profession until prevented by his last illness, which removed him from a long-continued and arduous career.

His death was caused by pneumonia of the left lung, produced by exposure in the discharge of his medical duties. The duration

of the disease was two weeks. He had suffered also from repeated attacks of malarial disease, from which he had become somewhat debilitated, previous to his last sickness.

He was married in July, 1849, to Rebecca E. Warner, only daughter of Eleazer and Rebecca Warner of North Haven, who died October, 1859. By this marriage he had three daughters, two now living—the youngest died at the age of three years.

He was married to Sarah A. Colt of New Haven in May, 1861. By this marriage he had one son, Edwin, now living.

He had three brothers and one sister, all living except Henry B. Stillman, who was a practicing physician in Coldwater, Mich., at the time of his death in 1865.

Dr. Stillman was appointed aid-de-camp (with the rank of captain) in the 10th N. Y. State Infantry, August 5, 1842. He was appointed Hospital Surgeon (with rank of Lieutenant-Colonel) 10th N. Y. State Infantry, July 4, 1842; was appointed postmaster at Burlington, N. Y., October 21, 1848; was elected president of New Haven County Medical Association; held the office of Selectman of the town of North Haven; also was a member of the Board of Education, and for several years was acting School Visitor.

He took a lively interest in the affairs of the town, and always expressed his opinions freely and without fear or favor.

He united with the Congregational church in North Haven, and afterwards with Grace Church (Episcopal) in Centerville, of which he was a member at the time of his death; was made a member of Hiram Lodge F. and A. M., of New Haven, and afterwards of Day-spring Lodge, Centerville, and was buried with masonic honors.

He possessed many sociable qualities, was genial, fond of society, a kind and indulgent parent, a good physician, and a highly esteemed citizen.

HENRY POTTER, M.D.

By F. N. BRAINARD, M.D., NEW LONDON.

Henry Potter, M.D., was born in New London, Conn., in the year 1825, and died of apoplexy, March 10, 1880, at the age of 55 years. He followed mechanical pursuits the most of his life,

though for the last thirteen years he has been engaged in the practice of medicine in this city, having graduated from the medical department of Yale College in the class of 1867. His practice was not large or very remunerative, and yet, so far as the writer's knowledge extends, his professional administrations bore the evidence of skill and good judgment. Commencing the practice of medicine late in life, when his physical energy was just on the wane, he did not rise to that eminence in the profession which (with his natural mental endowments rightly directed) he might have attained had he chosen this pursuit in his early manhood.

He held from time to time various public offices, such as captain of the police force, member of the Board of Education, and city physician.

He was married early in life to Miss Eliza Bishop of Waterford, Conn. Her decease occurred a few months previous to his own. Two sons and two daughters survive them. He was a member of the Roman Catholic Church.

As to the premonitions of his last sickness very little is known, but yet enough to warrant us in believing that his sudden demise was not wholly unlooked for by himself; for during the summer of 1878, while at work in his garden on a very sultry day, he received a partial sunstroke, since which time he suffered from frequent attacks of severe headache.

The morning previous to his death he complained to a friend of being ill and feeling the need of rest. About ten o'clock that evening he entered his office, and shortly after the inmates of an adjoining room heard heavy snoring, as of a person in a deep sleep, which was without doubt the stertorous breathing of apoplexy.

ASHBEL BRADFORD HAILE, M.D., NORWICH.

BY LEONARD B. ALMY, M.D., NORWICH.

Dr. Haile was born at Putney, Vt., May 29, 1806, and was one of twin boys. His father was a farmer, and in 1805 moved to Gouverneur, N. Y., then on the frontier. There his father settled, and reclaimed land from the wilderness. Here his early life was passed until he and his brother wished to leave the farm and study one of the professions. The father was opposed to their plan, but

finally started them with thirty dollars apiece, and the injunction not to come back in the summer.

He pursued his preparatory studies at Potsdam Academy, then a famous school, and entered Amherst College, where he remained one year, leaving at the expiration of that time to go to Yale, where he remained until he graduated in the class of 1835. During this time he supported himself by teaching, and giving lectures on chemistry and allied topics.

Having in view a professorship at Yale, he entered, after graduation, upon a theological course, which was then necessary for that position; but, by the advice of the late Dr. Knight of New Haven, he forsook the pulpit and entered the Yale Medical School, where he received the degree of M.D. in 1842.

During his leisure in New Haven, he studied astronomy, in which he did a great deal of practical work, and chemistry. He was also an ardent student of botany, and was said to have the largest private medical herbarium in New England, if not in the country.

Upon receiving his degree he came to Norwich, where he practiced for ten years, going in 1852 to California, where he remained until 1855, at which time he returned to Norwich, and made that city his home for the remainder of his life.

He soon made himself known as an active worker in the cause of advanced education, and took a deep interest in the public schools. He was a member of the Park Congregational Church, of which he was the senior deacon at the time of his death. He devoted himself strictly to the practice of his profession, and built up a large and lucrative practice, having among his patients the best families in the city. He always took a firm stand against the numerous forms of quackery, and was steadfast in his endeavors to keep it down, so far as possible. When the Norwich Medical Society was first formed he was made its president, and was a constant attendant at its meetings until ill health kept him away.

Some years ago he suffered from articular rheumatism, which, recurring from time to time, left him with valvular disease of the heart. This gave him little trouble until hypertrophy with dilatation followed, accompanied by attacks of angina pectoris. He was aware of his danger, and told many of his patients that he was liable to leave them at any time. Christmas night he attended divine service and was walking home, when he was attacked by his old enemy. This was followed by congestion of the lungs,

from which he recovered and made a few professional visits, but about the middle of January he had another and more severe attack. From that time he was confined to the house, and most of the time to his room. He was feeling remarkably well one afternoon, but during the night he was seized with angina, during which his heart stopped, on the morning of the 8th of March, 1880.

He was a staunch republican in politics, a liberal Christian, a genial gentleman, a devoted husband and father, and a successful, well-informed, hard-working physician. The world said, "A good man is gone to his rest."

In 1843 he married Miss Mary May, who, together with one daughter, survives him.

JAMES E. BARBOUR, M.D., NORWALK.

BY W. C. BURKE JR., M.D., SOUTH NORWALK.

Dr. James Edgar Barbour was born in the city of New York, Nov. 17, 1843. He was the oldest son of James G. and Anna M. (Starr) Barbour. When ten years of age his father removed to Norwalk, for the practice of his profession, that of dentistry. As a boy, Dr. Barbour was distinguished for his inordinate love of the acquisition of knowledge, so that one of his old playmates said of him, "He was seldom seen except with a book." The choice of his profession was made while still very young. When 15 or 16 years of age he entered a drug store in Norwalk, where he was always studying when a respite from duty made it possible. In 1861 he enlisted in the 17th Conn. Volunteers as corporal, but after a few weeks, before leaving for the South, he was transferred to the 21st Conn. Volunteers as hospital steward. Still pursuing his medical studies, in 1863 he presented himself before the Medical Examining Board at Washington, and passed with honor the rigorous examination for assistant surgeon in the regular army, but owing to the fact of his not having attended a medical school, and consequently without a diploma, he was only given the rank of "Acting Assistant Surgeon," and ordered to the U. S. G. B. "Iron Age" on blockade squadron off Wilmington, N. C. He was afterwards transferred to the "Emma," where he served until granted a furlough for purpose of entering the College of Physi-

cians and Surgeons, N. Y., where he graduated in the spring of 1865. The war being ended at about the same time, he resigned and entered upon the practice of his profession in civil life, at Wilton, Ct., where he remained about one year. Then, at the earnest solicitation of his friend, Dr. Lynes, whom he so honored, and has so soon followed, entered upon a practice in Norwalk and vicinity, which increased rapidly in extent, until it became one of the largest in the county. In 1867 he married Elizabeth A. Middlebrook, daughter of Geo. B. and Jane (Daggett) Middlebrook of Norwalk, who, with four little children, survives him. He united with the Congregational Church in early life, and continued an active member up to the time of his death. He was no ordinary man. Possessed of an insatiable desire for knowledge, he made attainments simply remarkable for his years and opportunities.

Never physically strong, no labor daunted him and no fatigue could conquer his determination to advance. He seemed to be confident that his time would be short, and crowded its hours to repletion. It was plain to all but himself that he was overworked, and that he was making demands upon a far from strong constitution that must soon bring a breaking-down, if not the destruction that has at last resulted. But no exhortations could turn him to consider his own needs, and, in addition to the claims he made upon himself as a general student, his kindness drove him to much work that his physical condition demanded should be left undone. Among the last professional calls he made, when scarcely able to lift himself into his carriage, were several to which he was impelled by the philanthropy that distinguished him.

Dr. Barbour's studies were not limited to the science of medicine. His was a liberal, generous culture, inspired by an ambition which surmounted all obstacles, to range at will through the universe of thought. He adopted Sidney Smith's motto, "It is noble to seek truth, and it is beautiful to find it." His genius for study, no less than work, enabled him to assimilate knowledge with marvelous quickness and precision. His linguistic attainments were varied and of high order, while art, literature, poetry, philosophy, and especially prehistoric studies had for him a peculiar charm. One needs but to glance at the titles of the volumes in his library to note the extensive field of scientific thought in which he was accustomed to find his recreation from graver duties.

He viewed all subjects, scientific and philosophical, from the broadest standpoint. At the same time he abhorred shams of

every sort, and, unfettered by conventionalities of expression or research, he was ever the honest, sincere, whole-souled seeker after truth.

In his intercourse with his professional brethren he was ever courteous, kind, and honorable, while his professional skill and the exactitude of his knowledge made him a valuable consultant, and one sought after to an extent remarkable for one of his years.

One cannot but be impressed with the resemblance and application to Dr. Barbour of Carlyle's tribute to John Stuart Mill:

"What one found in his conversation was a certain precision in his knowledge and view of a thing, and his opinion was always held to be worth hearing, as it was completely his own. But above all there was in him an exceeding tenderness, a deep and true affectionateness which engaged the love of all who had experience of it. His modest and sympathetic nature was felt at every moment, and there was something very sweet about it all."

In him the younger members of the profession found a kind friend and brother, one ever ready to extend a helping hand either in council, encouragement, or the use of his rich library. He was wont to say of them, they have a hard enough time with all the help that I can give. Would there were more like Dr. Barbour.

Next to the pleasure of acquiring knowledge he took delight in imparting it. Consequently it was but like him to take an occasional hour from his over-filled days to give a philosophical lecture, or reveal the wonders of the microscope to a class in school, to procure or lend rare books to stimulate some opening mind in search of truth, no less than to contribute of his money and time to public improvements.

The hay fever, Dr. Barbour's persistent enemy, compelled his absence from this vicinity for some six weeks during the autumn. He had tried various resorts, and the last three years had crossed the ocean. In 1878, after such a trip, he returned stronger than for years past, but again plunged so zealously and self-sacrificingly into his professional duties as to soon lose all benefits of the voyage. In April of last year he was prostrated by an attack of remittent fever, and when but partially recovered he commenced his labors, only to be again struck down by acute rheumatism with endo-cardial complication, in June. And in July, although prostrated so low as to leave but little hope of his recovery, he was carried to Europe again, and was journeying southward when his disease gave him the fatal stroke, at Pisa, Italy, on the 6th of De-

center, 1879. And as a candle at dawn burns low in its socket, and flickering goes out, so he peacefully died, leaning upon the arm of the Great Physician.

But though our friend filled so soon the measure of his days, he lived with an intensity of purpose which has gathered the results of many a long life within his few short years.

DR. SAMUEL LYNES, NORWALK.

BY W. A. LOCKWOOD, M.D., NORWALK.

Dr. Samuel Lynes, who died at Norwalk, July 29, 1878, was the son of Stephen C. and Hannah M. Lynes; was one of eight children, and was born at Ridgebury, in 1822. He was therefore fifty-six years old at the time of his death. He attended school while a boy, at Wilton, where he was fitted for college, and entered Yale, graduating in 1842. He was the only one of his name in his class,—one of the largest ever graduated, 105,—in which were many who have since distinguished themselves in the several professions and walks of life. After graduating he went to New York and began the study of medicine with Dr. Willard Parker, and attended lectures at the College of Physicians and Surgeons. Having finished his course there, he came to Norwalk in 1845, and commenced the practice of medicine, which he continued in the same place with unremitting diligence until his death. For many years he had been a leading citizen of Norwalk, and he enjoyed to the largest degree the confidence and esteem of his fellow-citizens. During his life he filled many positions of trust and responsibility, and at the time of his death was President of the Fairfield County Savings Bank; Treasurer of the Norwalk Fire Insurance Company; a Director in the National Bank of Norwalk; one of the Trustees of St. John's Masonic Lodge, of which he had been Past Master; a prominent Odd Fellow, having been Past Grand Master and Past Grand Representative; a Vestryman of St. Paul's Episcopal Church; a member of the State Board of Trustees in the Connecticut Hospital for the Insane at Middletown, with many other minor trusts and responsibilities. He had represented his town in the Legislature, and was one of the Water Commissioners of Norwalk, and took an active part in having public water-works

completed for the town. The funeral of Dr. Lynes was the most largely attended of any ever witnessed in Norwalk, and every one seemed burdened with a deep sense of personal bereavement. All stores and places of business were closed during the time occupied by the funeral, and everything betokened an unusual sorrow. As was well said by one afterwards, "One very plain lesson taught that day was this: the value of a long and continued residence in the same community." Dr. Lynes had resided in Norwalk for two and thirty years, and was known and beloved as he could not have been anywhere if he had been continually shifting from place to place. In these days of constant changes it is well for a man to consider this. The profit resulting from a change ought to be considerable, to balance the loss of cumulative power and influence a true man gets from a long residence. Especially is this true if a man identifies himself, as Dr. L. did, with every interest and improvement for the good of the place, sometimes to his own detriment. The constant tension to which our professional brother was subjected from overwork and mental anxiety had its culmination finally in a gradual failure of his general health, and he was attacked during the last few years of his life by malarial disease, which weakened him physically and made him mentally despondent. He was thus often prostrated, and on Sunday, July 28, 1878, while returning from visiting a patient, he was attacked by cerebral trouble, which finally ended in meningitis and death. His professional reputation, his useful life, his upright character are the rich and imperishable legacies left his stricken family and the wider circle of relatives and intimate friends.

DR. LEWIS RICHARDS, M.D., NEW CANAAN.

By W. G. BROWNSON, M.D., NEW CANAAN.

He was born in the town of New Canaan, July 28, 1797. His educational advantages were superior to those of most farmers' boys at that time, for, after attending the district school, he entered Weston Academy, and graduated with honor. Choosing medicine for a profession, he studied with Dr. Shepard of Newtown, and the elder Dr. Perry of Ridgefield, after which he attended medical lectures in New York city. At the age of twenty-six he returned

to his native place, and engaged in practice. He gradually grew into favor, and built up an extensive, though not a lucrative business. In 1826 he married Mary Selleek of Vermont. Of the children born to them, four reached maturity.

Dr. Richards was a man of marked and positive characteristics. He was tenacious of old habits and customs, and carried this to the extent of eccentricity. He was also a shrewd joker, and when, as was sometimes the case, he was made the butt of raillery or ridicule, his would-be tormentors uniformly came off second best, and the laugh, designed for the Doctor, was turned upon the aggressor.

Dr. Richards possessed a very remarkable memory. He could give the date of nearly every birth, marriage, and death which occurred during his practice of about fifty years. He was an ardent controversialist, and keenly enjoyed any advantage gained over an opponent.

Perhaps his most prominent characteristic was candor and perfect truthfulness. He was frank and outspoken, even to bluntness, and scorned duplicity and deception, and all the low artifices by which popularity is often sought.

He strictly followed the regular practice, and persistently refused to apply the title of Dr. to any practitioner who had not received a diploma from a regular medical school. He was an enthusiast in his profession, and always responded to professional calls regardless of fatigue, darkness, or storm. He had rare good sense and prudence, and was eminently a safe practitioner. The Doctor possessed an element vitally important in the character of a true physician—sterling integrity. Though not a church member, yet he was a firm believer in the truths of Christianity, and his life was evidently actuated and guided by sincere religious principle. He was a man of rare moral courage. He never hesitated to avow and defend his sentiments, or to rebuke wrong-doing.

The latter part of Dr. Richards' life was clouded by misfortune and sorrow. His wife, to whom he was tenderly attached, died in 1845. He suffered a great affliction in 1856, in the death of his daughter Sarah, a young lady of unusual personal attractions and loveliness of character. Financial embarrassments obliged him to sell the old homestead in 1867. His daughter Sophia, who married James S. Olmstead of New Haven, died a few years since. His final affliction came in 1878, in the death of his second wife, to whom he was married in 1848 or 1849.

There is a touching pathos in his situation as we see him at

this time. Old, feeble, broken in spirit, with faculties impaired, stripped of earthly comforts and blessings, he goes, when past four score years, to make a home in a strange land, and dies there. His earthly career was ended at the home of his son James, in Keelersville, Michigan, March 29, 1880.

JUSTUS SHERWOOD, M.D., SOUTHPORT.

BY REV. MR. WELLS, SOUTHPORT.

We mourn to-day the loss of one of our oldest citizens, one who for more than half a century was so closely identified with its every family—the beloved physician, Dr. Sherwood. It is due to him—it is due to the community—it is due to that profession, the noblest of all—a profession so loved by him, and so honored by his life—that some tribute should be offered to his memory.

Justus Sherwood was born at Southport, Connecticut, in 1805. His father died before his birth. He graduated at Yale in 1824, studied medicine with the revered and honored Dr. Knight, of New Haven. He was married to Henrietta I. Butler, of New Haven, grand-daughter of Ralph Isaacs, of Branford, in the year 1828. His wife died in 1844, leaving him with five children, who survive him. He never married again, but to the last preserved a precious love for his wife and mother of his children. Even during his last sickness, so marked by his touching patience in long suffering, he often asked that little mementoes of his loved wife might be brought to him, and when brought, spoke of old recollections with the tenderest feeling.

His entire professional life was spent in his native place. His devotion to his profession and regard for duty to his patients was so great, that he was rarely ever known to spend more than a day from his field of labor. Few men have such a record—few men have lived, who, from their lives, have become so much a part and parcel of the community in which they lived as he.

It is hard to review the life and character of such a man as our friend Dr. Sherwood. He was one whose mind was marked by a wonderfully even blending of all the faculties which inevitably render the possessor sound and reliable in judgment—useful in life—rather than by the brilliant preponderance of some one fac-

ulty, that for a time calls forth praise and admiration. Possessed of a remarkably retentive memory, he was at all times able to draw from its treasures, the results of study, experience, and observation. Careful in expressing an opinion, or forming a conviction, his judgment was keen, discriminating, and sound—never hasty—always carrying great weight on account of its conclusions being the result of careful, legitimate reasoning. He was endowed to a rare degree with that quality of all qualities—common sense—a quality which, perhaps, above all others rendered his long life so useful, so honorable, so loved. Kindness, sympathy, and benevolence were prominent traits of his character. His very expression of countenance made them manifest—his whole life—his professional intercourse with this community, for more than half a century, bears record to them. All this, however, never for an instant weakened his judgment or decision. Firm in his convictions of right and wrong, charitable in his condemnations, conciliatory, cautious, and prudent in his intercourse with men, he was loved and confided in as the family physician, trusted and admired as a brother by his professional brethren. True and loyal to his profession, to his convictions, to his friendships, no one will dare even to whisper that he ever in his long life attempted to attain an object or reach an end by any designing or dishonorable course; that he ever allowed the words of slander or of scandal against a friend to be uttered in his presence. Treachery, subterfuge, and underhand means were utterly foreign to his character. Humble, remarkably free from ambition, careless in his appearance, wonderfully accessible to all—going in and out among all men, without a shade of dissimulation, malice, or suspicion—his sympathies so diffused that his true worth and merit was scarcely appreciated by his best friends.

Deep, earnest, and heartfelt were his religious convictions. If there were any dark shadows or fears, it was that science and philosophy in their modern dress, might for the moment shake the foundation of some century-honored belief. His own words express best his own convictions: "Religion is a deep mystery—the Bible a great study—all we can do is to make manifest within ourselves our love and trust in God, whose every manifestation shows Him a being of tenderness, love, and sympathy. I believe God looks upon man, as does the father who so tenderly clings to an unfortunate child."

As his pastor and intimate friend for years, I can say what the

entire community will respond to. I have never met a more thoroughly unselfish man than he, nor one that in every circle of life, high or low, rich or poor, learned or ignorant, so poured out the fullness of an overflowing heart upon all. Generous and kind, no appeal of the poor and suffering, or for Christ, was ever made in vain. Limited in means, he did what he could.

His grave is wet with the tears of the poor and suffering, for the poor have but few friends in this world. Truly it may be said of him, "When the ear heard him, then it blessed him. Because he delivered the poor that cried, and the fatherless, and him that had none to help. The blessing of him that was ready to perish came upon him, and he caused the widow's heart to sing for joy. He was a father to the poor, and the cause which he knew not he searched out."

Such was Dr. Sherwood in his public life. Such the man who for fifty years has been pre-eminently prominent in this community and neighborhood.

As to his home life, I will not for a moment draw aside the veil to show the husband and father, for words would fail to express the value of his loss to the loved ones.

JAMES CAMPBELL LATHROP, M.D., NORTH GROSVENOR-
DALE.

BY EDGAR T. MORSE, M.D., SOUTH KILLINGLY.

Dr. James C. Lathrop, son of Edwin and Lydia E. Lathrop, was born March 19, 1852, at Sterling, and died at Griswold, July 16, 1879, aged 27 years and 4 months.

He was the eldest of a family of four children, and in his death his parents experience their first great family affliction. From Sterling his father removed, while he was but an infant, to the village of Hopeville in the town of Griswold, and here he spent his youthful days until he had reached the years of manhood. From the village school he went to Lawrence Academy, Groton, Mass., from whence he graduated. He began the study of medicine soon after with Dr. Wm. Witter of Greeneville, and finally received his degree of "Doctor of Medicine" from Bellevue Hospital Medical College in the class of 1875. The summer of that year he acted as assistant

for Dr. Robinson of Danielsonville, and later in the year opened an office at North Grosvenordale. The following spring he removed to Moosup, at which place he remained but two months, practicing with Dr. F. S. Burgess, when he returned to his old field of labor at North Grosvenordale. Here he remained until failing health, in March, 1879, obliged him to retire from practice and return to his boyhood's home to die. The previous summer had been spent among the Adirondaeks, in the vain search after health, and for a time it seemed as if the hand of the destroyer had been stayed, but it was not for good. Day after day saw his hold upon life visibly weakening, and the sands ran wearily out until the morning of July 16th, when he died. His disease was phthisis pulmonalis.

In 1877 Dr. Lathrop was married to Miss Helen M. Aldrich, who bore him two children, the last one being less than twelve hours old at the time of his death.

Both as a man and a physician, Dr. Lathrop had many qualities that served to inspire marked love and respect towards himself in those with whom he came in contact either in a social or professional capacity. Unassuming in his deportment, both among and outside the profession; liberal in his views, yet very reticent in his expression of them; intensely energetic in the prosecution of his work; studious in his habits; loving and gentle in his private home life; honorable towards his brother members of the profession; genial and polite towards all,—in his death the profession has lost a worthy man. Always of feeble constitution and frail physical structure, he was but poorly prepared to fight the battle of life; and yet those who have witnessed his manly efforts to prepare himself for the contest, and after, will bear willing testimony that he bore his part in life nobly, and, as a man and a physician, accomplished commendable results, and at the last, when health and strength failed, he laid down to die, only regretting that life had been too short to accomplish more. In his death is lost a loyal son, a loving husband and father, and a kind physician and friend.

HENRY M. KNIGHT, M.D., LAKEVILLE.

Henry Martin Knight was born Aug. 11, 1827, at Stafford, Conn., and died at Fernandina, Florida, Jan. 22, 1880, aged 52 years.

He was the fifth son of Joseph and Ruba Knight. His father was settled as pastor over the Congregational Church at Stafford, and was known far and wide among the ministry as Father Knight. During a long ministry he suffered severely from a distressing malady, and often, when unable to stand, would preach while seated in a chair in his own house to his congregation there gathered. This steadfast adherence to duty at any cost was transmitted fully to his son. Amidst these influences his boyhood was passed, in the healthy atmosphere of the country, at Stafford, and later among the hills of Granby and Peru, Mass. The strict economy of a country minister's home with a large family to provide for with a small salary early fostered energy, self-reliance, and perseverance in the face of apparently discouraging circumstances. His education was acquired by his own efforts, energy, and self-denial. At the age of sixteen he entered Williston Seminary, in Easthampton, already a celebrated institution. His vacations were occupied in teaching school; this led him at one time to Norfolk, where he became acquainted with his future wife, Miss Mary Phelps.

In 1847 he commenced the study of medicine with Dr. Smith of Monroe, Mass., and afterwards studied with Dr. Miner of South Braintree, Mass. He graduated at the Berkshire Medical College, Pittsfield, Mass., in 1849; was soon after married, and commenced the practice of medicine at Stafford Springs. In 1851 he removed to Lakeville, and entered into partnership with Dr. Benjamin Welch, then a well-known practitioner. He was actively engaged in the practice of his profession until the current of his life-work was changed in the direction of the care of weak and feeble-minded children. He was ever ready to respond to the calls of the suffering, knowing no difference in this respect between rich and poor. He fairly earned the title of the "beloved physician."

In 1854 he was elected to the legislature, and was appointed one of a committee to ascertain the number of imbecile children in this State. The knowledge acquired while serving on this committee, together with his previous study and observation, inspired him with

the idea of founding the school which is his best monument and memorial. In 1856 he presented his plans to the legislature, and asked that Connecticut should establish a school for imbeciles similar to those already constructed by Massachusetts and Pennsylvania. The measure passed the House, but was defeated in the Senate by one vote. In 1858, abandoning the hope of State aid in establishing the enterprise, he gave up general practice, and opened his own house for the reception of feeble-minded patients, meeting with such success that six years later he erected the main wing of the present large building. Later the buildings were enlarged by appropriations from the State, which eventually recognized the utility and importance of the institution. After many discouragements and rebuffs which would have led most men to give up the project, public sympathy and interest were aroused, and a law was enacted giving aid and support to a limited number of children, the State's sad and helpless ones who had found in him a friend and advocate.

He died when he was entering a period of permanent prosperity, when the heavy work of urging, arguing, pleading, was mainly over, and an assured support secured—his family was growing up around him aiding and taking an interest in his work, and as far as human eye could see he was receiving the reward of years of labor and anxiety. But the good work he began will now be carried on by other hands, giving blessings to many.

He gave up his life for his work, in the most unselfish manner, in a path generally considered as disagreeable and unpromising; and, with a perseverance which was wonderful, wrought out and brought to an acknowledged success the truth that much could be done with feeble-minded children. He never was heard boastingly or selfishly to exalt himself on this account, but if he ever did cherish the feeling that he had done a good thing, it was with a feeling of heartfelt thankfulness for the accomplishment of good to others, rather than with any vain glorying for himself. When we see a man so conscientious in his work as he was, and where so few are found willing to work, then we are bound not alone to accord to him all honor, but to hold up his hands and give him such substantial aid as the good and faithful servant always deserves. As his pastor said at the funeral service, "he gave himself freely for others," and among men and women few labor to do their duty more faithfully, and do it not with an eye to man service, but conscientiously, and in the sight of God.

What wonderful enthusiasm he possessed! To see him taking his children in his arms, or on his knee, and talking to them with evident pleasure, one would say, Now those children are pleased with those attentions, and appreciate that kindness of heart which so devotes itself to them. But it did not affect him if no immediate recognition was shown, and the dull and listless countenance gave no indication that any impression was made. Who persists in his familiarities with a dog even, who, in his doggish way, does not recognize the voice or hand of his master? we are pleased that the "beasts that perish" show some acknowledgment of our attentions. But he showed no signs of disgust nor gave any utterances of peevishness if his advances were not readily noticed, and here was where there was a great difference between him and most of men, and showed how much he had of love in his work.

Dr. Knight was possessed of wonderful energy; whatever he undertook he did with his whole heart. His mind had such a practical turn that he saw right to the bottom of a thing at once; his perceptions were so acute and rapid that a subject was examined and settled while some were only beginning to consider it, and his judgment was so correct that he was rarely at a fault. In conversing with him, you would say, Now this man has no nonsense about him. All that he did he did with his might; whether it was in the practice of his profession, in his special teaching, in his efforts in the cause of temperance, in his labors in the Sunday-school; in the fulfillment of his duties in the church, or in his aid to any measure of interest in the village, that he did with his whole heart. Nor was it done grudgingly, or as if from necessity, but with cheerfulness and sincerity. He was, I think, of a very plain, downright, and outspoken nature. When you wished for his opinion you got it, and not so overwhelmed or bound up in words that you were really uncertain whether you had gotten an opinion or no. Nor was it given so bluntly and offensively, under the plea of speaking the truth, that you felt insulted. For some of these plain-speaking people, with no regard to one's feeling, or the common decencies of intercourse, there is little which they more richly deserve than an instantaneous knocking down.

But Dr. Knight was kind and courteous; he was so by nature, and these qualities were strengthened by his convictions. No one in any business, and especially no physician, can afford to be otherwise than polite and considerate towards others; the time for the blunt Abernethys has passed by, and no one need expect that his brutality can be at all compensated by his talents.

Our friend labored in all his vocation most abundantly. His large head, and broad shoulders, and well-developed frame afforded, one would say, a good prospect for a long life; and it was true. But no nervous system, however strong, can always bear an excessive strain. By and by there comes a break in it, and it came to Dr. Knight, just as it has come to thousands of others, and will come to thousands more, who are neglectful of themselves. Strong men admit this, and reason about it in general, and say that no one has a right to so abuse his own body, and yet go right on doing the things they would not, and hoping probably that the inexorable law will not be applied to themselves. And yet there seems to be a certain amount of excuse for these persons, and in admiration of their powers one is inclined to forgive, or regard lightly their special easings of sinning. With the many instances of slothfulness we so often see, it is glorious to sometimes see a man, with all his strength of mind and body, conscious of the power within him, exercising his powers not for himself alone, but as we have said, and it is especially true of Dr. Knight, for others.

His hospitality was unbounded, and it seemed a great pleasure to him if he could add to the pleasure of his friends. The mountain scenery of Litchfield and the adjacent Berkshire county afforded opportunity for numerous excursions among the hills and valleys of those far-famed regions. Endowed with a keen love of nature, he was familiar with every nook and haunt, and delighted to visit them with congenial friends, and to make long trips into the neighboring country, finding thus a relaxation from the cares and duties of life.

Among the prominent traits of his character was a strong sympathy with every humanitarian enterprise, and especially with the workers in their dark days of doubt and discouragement. Many an earnest toiler has been encouraged by his cheery God-speed, and found thus strength to persevere. Few indeed would, at the cost of personal discomfort, and even loss, labor for causes that had only their intrinsic merits to recommend them, as would Dr. Knight. The words of Terence would well apply to him:

"Homo sum; humani nihil a me alienum puto."

He was indeed a noble man, a man whose neighbors, even to-day, are regarding as more noble than when he went in and out among them. The greatness of some men goes before them and is forgotten; the greatness of others comes after them, and the fragrance is lasting.

He was a man of consecrated heart, and did his work not merely as a secular business, but from the purest and highest motives, and he loved it. It enlisted his soul and whole being in a religious sense. He had large sympathy and large hope, and, like a painting duly proportioned and colored, his character appears the more interesting and instructive, the more minute and protracted the study of it.

Dr. Knight was a member of the Litchfield County Medical Society, and of the State Medical Society, in which he held many places of trust and honor. He was also a zealous and active member of the American Medical Association, and well known to the habitual attendants upon that body, and was an active member of that section in which the training of the feeble-minded and kindred topics were discussed.

He was courteous and polished as a gentleman, simple in manners, and kind and amiable in his feelings. He was active in doing good, and fruitful in good devices in his institution, his home, and in his community. He had practical wisdom and good sense for public affairs, and the church and Sabbath-school with which he was connected were largely aided and benefited by his work. He had a nicely-balanced proportion between the various excellences of his character, which though it made each one, perhaps, a less conspicuous object of notice, yet gave the whole a far higher value. His firmness, his decision, his independence of spirit, with his real gentleness and kindness, were in that happy combination that made a marked man.

His mind was not rapid and sparkling, but it was sagacious, patient, and sure. Whatever he saw, he saw clearly in its just proportions, and its proper place, and he had the strength and will to climb for it. Like that something which in architecture we call effect, his character presents itself with pleasant and inspiring influences.

Physically, as you all well know, he was well-proportioned, large, and manly, his countenance denoting native independence, firmness, energy, candor, frankness, simplicity, and benevolence, with mental vision that intuitively saw the relations and bearings of objects; regulated and controlled by that sound common sense which rightly apprehends circumstances, and adapts means to ends—all these attributes were chastened and ennobled by a Christian piety—living in a word, not unto himself, but *for* others as his highest homage to God. “To have true respect for ourselves guides our

morals, to have deference for others governs our manners"—thus was he, a Christian gentleman.

In 1864 he was chosen Superintendent of the Sabbath-school at Salisbury, an office he held until the present year, with exception of some few years. He was connected with the Sunday-school Union from its inception, and served frequently as President or member of the Executive Committee. He always looked forward with pleasure to the annual meetings, which he attended whenever health would allow.

In 1874, while speaking on the Physical Effects of Alcohol, at Plantsville, at the invitation of a well-known friend of temperance, he was seized with intense pain in the head and spine, so intense that while concluding he could not see the faces of his audience. This was the commencement of his ill health.

This attack was the commencement of spinal irritation, and for many months he was an invalid. After rest and travel in this country and in Europe he was mainly restored to practical business ability, although his health never fully recovered. Continually in pain; much of the time confined to his room, he nevertheless conducted the affairs of his Institution, was at his post in the Sunday-school whenever possible, and although strictly forbidden by his physicians, still spoke, occasionally in public on subjects dear to his heart. The latter part of December last, he left his home to spend the winter in Florida, hoping for a comfortable winter, but was taken with severe symptoms at Fernandina, and died on the twenty-second of January, of rupture of the gall-duct. And so the heroic spirit wore the feeble flesh away until one winter's day the sad tidings came that the weary struggle was over and he had entered into rest, for "God's finger touched him and he slept."

The funeral, at Lakeville, was attended by a large concourse of people, who had known, respected, and loved him, including representatives of the medical profession, and members from both branches of the legislature of the State.

His widow and two sons survive him. One of his sons is in charge of the institution organized by his father in Minnesota, the other of that at Lakeville.

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S. G. RISLEY, M.D., of Rockville, President.

GILBERT H. PRESTON, M.D., of Tolland, Clerk.

Censors—G. H. PRESTON, M.D., WM. N. CLARK, M.D., S. G. RISLEY, M.D.*County Reporter*—S. G. RISLEY, M.D.

TOLLAND, G. H. Preston.	West Stafford, Joshua Blodgett.*
BOLTON, CHAS. F. SUMNER.*	Stafford Springs, C.B. Newton, F.L. Smith.
COLUMBIA, J. LaPierre.	VERNON,—Vernon Depot, A. R. GOODRICH.*
COVENTRY, Maurice B. Bennett.	Rockville, Stephen G. Risley, Francis L. Dickinson, Frederick Gilnack, E. K. Leonard.
South Coventry, Henry S. Dean.	WILLINGTON, Wm. L. Kelsey. —21
ELLINGTON, J. A. Warren.	
MANSFIELD CENTER, E. P. Flint.	
Mansfield Depot, F. E. Johnson.	
STAFFORD, Wm. N. Clark.*	

* Over sixty years of age.

REPORT

OF THE COMMITTEE TO NOMINATE PROFESSORS AT THE
MEDICAL DEPARTMENT OF YALE COLLEGE.

The Committee to Nominate Professors to the Medical Department of Yale College met the committee of the Faculty in

1879, and nominated the following gentlemen: W. H. CARMALT, M.D., FRANCIS BACON, M.D.

Attest,

W. DEMING, M.D.,

For the Committee.

May 25, 1880.

REPORT OF THE COMMITTEE OF EXAMINATION.

D. A. CLEAVELAND, M.D., REPORTER.

During the year, in accordance with the usual rule, there have been two sessions of the Board for examination of students,—the first on June 24, 1879, and the second on February 12, 1880.

In response to the notice given by the Dean, there was present, on the part of the Society, on June 23d, D. A. Cleaveland, M.D., who examined the papers of the candidates for graduation, as well as those in special branches.

At the meeting of the Board on the 24th there were present, on the part of the Society, A. R. Goodrich, M.D., President of the Board, Melancthon Storrs, M.D., D. A. Cleaveland, M.D., and Gilbert H. Preston, M.D.; and, on the part of the Faculty, there were present Professors White, Lindsley, Hubbard, Sanford, and Silliman.

The following gentlemen were recommended for graduation:

George Jacob Augur,—Thesis, "Animal Heat."

James Conquest Barker,—Thesis, "Oleum Morrhuæ."

Andrew Bennett Gorham,—Thesis, "Excision of Elbow-joint."

George H. Hammond,—Thesis, "Thrombosis and Embolism."

Alton Winslow Leighton,—Thesis, "Sanitary Science."

George Orrin Robbins,—Thesis, "Hemorrhage."

Charles Theodore Roberts,—Thesis, "Observation and Judgment."

William James Wakeman,—Thesis, "Rest as a Therapeutic Agent."

The following gentlemen were passed in special branches:

William B. Graves.

Charles H. Howland.

Theodore R. Parker.

Voted, That D. A. Cleaveland, M.D., be appointed to report the doings of the Board to the State Society.

Adjourned.

At the meeting of the Board on the 12th of February, 1880, there were present, on the part of the Society, Doctors Goodrich, Storrs, and Cleveland; and, on the part of the Faculty, Professors White, Silliman, Smith, Sanford, Hubbard, Lindsley, Wilcox, and Thatcher.

The following gentlemen were recommended for graduation:

J. Frank Calef.
Henry Douthiel.
Charles E. McGowen.
Leonidas C. Vinal.

By a late rule of the College, the candidates for graduation were not required to write theses.

The following gentlemen were passed in special branches:

H. Holbrook Curtis.
Loring T. Day.
Edwin R. Roberts.
S. W. Williston.

Adjourned.

PROCEEDINGS

OF THE

Connecticut Medical Society,

1881.

NINETIETH ANNUAL CONVENTION,

HELD AT

Hartford, May 25th and 26th.

NEW SERIES. VOL. II.—NO. 2.

PUBLISHED BY THE SOCIETY.

C. W. CHAMBERLAIN, M. D., Secretary,

HARTFORD, CONN.

HARTFORD, CONN.:

PRESS OF THE CASE, LOCKWOOD & BRAINARD CO.

1881.

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The Connecticut Medical Society does not hold itself responsible for the opinions contained in any article, unless such opinions are endorsed by a special vote.

The next Annual Convention of the Connecticut Medical Society will be held in New Haven, the 4th Wednesday in May, 1882, and remain in session during the Thursday following.

OFFICERS OF THE SOCIETY,

1881-1882.

PRESIDENT.

WILLIAM DEMING, Litchfield.

VICE-PRESIDENT.

WM. G. BROWNSON, New Canaan.

VICE-PRESIDENTS, *Ex-Officio*.

G. W. SANFORD, M.D.

A. H. CHURCHILL, M.D.

E. C. KINNEY, M.D.

WILLIAM C. WILE, M.D.

HENRY W. HOUGH, M.D.

WALTER S. MUNGER, M.D.

RUFUS BAKER, M.D.

STEPHEN G. RISLEY, M.D.

TREASURER.

F. D. EDGERTON, M.D.

SECRETARY.

C. W. CHAMBERLAIN, M.D.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

W. A. M. WAINWRIGHT, M.D. L. S. WILCOX, M.D.

GEO. F. LEWIS, M.D.

STANDING COMMITTEES.

On Examination.

WM. DEMING, M.D., *ex-officio*.
J. G. STANTON, M.D.
G. H. PRESTON, M.D.
D. A. CLEVELAND, M.D.
H. S. FULLER, M.D.
C. E. HAMMOND, M.D.
ELIJAH BALDWIN, M.D.
ORLANDO BROWN, M.D.

Committee to Nominate Professors to the Medical Department of Yale College.

G. W. RUSSELL, M.D. R. S. GOODWIN, M.D.
C. H. PINNEY, M.D. ISAAC G. PORTER, M.D.
M. B. BENNETT, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

ASHBEL WOODWARD, M.D. G. L. PLATT, M.D.
L. HOLBROOK, M.D. C. H. BILL, M.D.
S. G. RISLEY, M.D.

Committee of Publication.

C. W. CHAMBERLAIN, M.D. } *ex-officio*.
F. D. EDGERTON, M.D. }
IRVING W. LYON, M.D.

Committee of Arrangements.

FRANCIS BACON, M.D., *Anniversary Chairman*.
J. F. C. FOSTER, M.D.
J. K. THACHER, M.D.

Dissertator.

N. NICKERSON, M.D.

Alternate.

C. J. FOX, M.D.

PROCEEDINGS

CONNECTICUT MEDICAL SOCIETY — NINETIETH ANNUAL CONVENTION.

The President and Fellows of the Connecticut Medical Society met in the Common Council Chamber, City Hall, Hartford, at 3 o'clock p. m., Wednesday, May 25, 1881.

In the absence of the President the Vice-President, William Deming, M.D., of Litchfield, presided. The convention was called to order promptly at three, and the President appointed Lowell Holbrook, M.D. of Thompson and the Secretary, as a committee to examine the credentials of the Fellows. The list of Fellows as approved by this committee was then read by the Secretary, after which motions to fill various vacancies in the county delegations were made. Dr. Orlando Brown of Washington, objected to this as not in order, that the Convention has no power to elect Fellows. This view was sustained by Drs. R. W. Griswold of Rocky Hill, M. C. White, and C. W. Chamberlain. On the other hand it was shown that similar action had been taken previously. On motion of Dr. Chamberlain, seconded by Dr. Orlando Brown, it was.

Voted, That the action of the Society in filling vacancies in several county delegations, be and is hereby rescinded, and that the list of Fellows as read by the Secretary, be accepted as the official list for this Convention.

The resolution was passed unanimously.

LIST OF FELLOWS, *Ex-Officio*.

President.

G. L. PLATT, M.D.,* Waterbury.

Vice-President.

WILLIAM DEMING, M.D., Litchfield.

Vice-Presidents, Ex-Officio.

G. W. SANFORD, M.D., Tariffville.
 A. H. CHURCHILL, M.D.,* West Meriden.
 E. C. KINNEY, M.D., Norwich.
 WILLIAM C. WILE, M.D., Sandy Hook.
 HENRY W. HOUGH, M.D.,* Putnam.
 WALTER S. MUNGER, M.D.,* Watertown.
 RUFUS BAKER, M.D., Middletown.
 STEPHEN G. RISLEY, M.D., Rockville.

Treasurer.

F. D. EDGERTON, M.D., Middletown.

Secretary.

C. W. CHAMBERLAIN, M.D., Hartford.

Committee on Matters of Professional Interest in the State.

W. A. M. WAINWRIGHT, M.D.,* Hartford.
 L. S. WILCOX, M.D., Hartford.
 W. L. BRADLEY, M.D.,* New Haven.

FELLOWS ELECTED IN 1881.

Hartford County.

H. S. Fuller, M.D.	E. P. Swasey, M.D.
E. Warner, M.D.	R. M. Griswold, M.D.
G. W. Steadman, M.D.	

New Haven County.

W. H. Carmalt, M.D.	E. B. Heady, M.D.
R. B. Goodyear, M.D.	L. J. Sanford, M.D.
W. G. Alling, M.D.	

New London County.

L. S. Paddock, M.D.*	F. N. Braman, M.D.
W. M. Burchard, M.D.	A. Woodward, M.D.
A. Peck, M.D.	

* Absent.

Fairfield County.

C. H. Bill, M.D. Wm. C. Wile, M.D.
 N. E. Wordin, M.D. Wm. C. Burke, Jr., M.D.
 M. V. B. Dunham, M.D.

Windham County.

Lowell Holbrook, M.D. W. H. Judson, M.D.
 C. J. Fox, M.D. R. Robinson, M.D.*
 A. E. Darling, M.D.*

Litchfield County.

R. S. Goodwin, M.D. Orlando Brown, M.D.
 J. B. Derrickson, M.D. W. J. Beach, M.D.
 G. H. Miner, M.D.

Middlesex County.

D. A. Cleaveland, M.D. A. M. Shew, M.D.
 C. M. Hubbard, M.D. A. A. Hough, M.D.
 Albert Field, M.D.

Tolland County.

F. Smith, M.D.* M. B. Bennett, M.D.
 E. P. Flint, M.D.

The Vice-President then addressed the Convention as follows:

Gentlemen, and Fellows of the Connecticut Medical Society:

I greatly regret the necessity which requires me to announce to you, that on account of impaired health, the honored president of our Society has been obliged to go abroad, and that therefore the duty of presiding over this meeting devolves upon me, as your vice-president.

I am aware that it is customary at the anniversary meetings of societies such as ours, for the presiding officer, to give an address upon some subject connected either generally or specially with the science.

In later years, in our own Society, the somewhat curious custom has obtained of having *two* such addresses, one at the meeting of the Fellows and another at the general meeting of the Society on the following day. I can see no good reason for this

* Absent.

practice, and believe that it should be discontinued. That the President at the annual meeting of the Fellows, should give a statement of the matters which may come before them for consideration, somewhat after the manner of the annual message of the chief magistrate of a state to its legislature, seems proper and necessary; but I cannot see the propriety of giving a formal address, often a mere literary exercise, on the second day of the meeting, especially as it encroaches so greatly on the time required for the reports of the officers and committees and the reading of the more practical and valuable papers which are so interesting a feature of that day's exercises.

Called as I am, somewhat unexpectedly, to preside over this meeting, I presume that no formal address will be required or expected. I shall therefore, only call to your attention, as briefly as possible, the more important subjects which may come before you for consideration.

Perhaps the most important of all these is the question of *Medical expert testimony*. The committee appointed at our last annual meeting to consider this subject have found perplexing questions and many difficulties; some of these seem to grow out of the extreme conservatism of courts and counsel, and their characteristic reverence for the doctrine of "precedent;" but the subject will be so fully considered in the report of the accomplished chairman of your committee, that it is only necessary for me to allude to it here.

The kindred subject of the sale of poisons will also occupy your attention. A law concerning this matter was passed by the recent legislature, but as this does not seem to cover enough ground, and to be in other ways inadequate for the protection of the public, additional legislation will probably be required.

Another important report will be that of the committee appointed at the last meeting to consider the subject of conferring additional powers upon the State Board of Health, respecting the care and preservation of records and vital statistics. These are all subjects of great importance, both to ourselves and to the community. As each of these reports, if adopted, may require a petition from our society to the General Assembly of the state for suitable legislation, they cannot be too carefully or too thoroughly considered.

The report on Lunacy Commission needs only the name of the distinguished alienist who will present it, to bespeak your fullest attention.

The old but by no means worn-out subject of medical education seems in later days to be assuming new phases. Movements are very generally being made throughout the country to increase the length of time required for medical study to four years instead of three years, as in the past, and to require a higher degree of preliminary training than has hitherto been customary. The wisdom of this movement is obvious, and some action on our part seems desirable.

I may here say a few words on the subject of state medicine. Since our last annual meeting, no less than five states have created State Boards of Health, viz.: New York, Iowa, Indiana, Arkansas, and West Virginia, and such Boards will doubtless be created in many other states before the close of another year. The activity and energy of our own board have received the admiring approval of all the principal Sanitary and Medical Journals. Its good work has certainly been equal to that done in any other state, and with the increased facilities afforded for studying vital statistics given in its recent very able reports, we may expect a still higher degree of efficiency and usefulness.

I may also mention that several of the states have passed medical practice acts. The law in our own state seems to be a partial measure, devoted to a specific thing, and perhaps requires change.

Physicians and the public are to be congratulated on the fact of a Pharmacy Board having been created. It is certainly a great step in advance.

If ever medical society had reason to congratulate itself on its continuous and increasing prosperity, that society is ours. Although our losses by death have been large, our membership is greater than at any former period of our history. The growth is steady, the dues well paid, and a greater interest taken in our proceedings. The most notable increase of membership is that in Fairfield county, though other counties show gains. In 1876 that society had forty-five members. It now has seventy-one members and is the third in point of numbers in the state. Formerly it was difficult to get together a dozen of its members, now it holds large and interesting meetings.

The secretary informs me that the pecuniary relations of the members to the society are much improved.

Already is the influence of our society felt as "a power in the commonwealth." The public are beginning to realize that it is not respectable for a medical practitioner to be outside of its pale.

and that it is unsafe to place their lives and health in the hands of those who are debarred its privileges. Quackery and charlatanism must exist as long as ignorance, but there is no one thing that can be made so effectual in suppressing these evils, as the well directed efforts of an honorable, enlightened, and intelligent State Medical Society. Such a one is ours. Let us so uphold its honor, its dignity, and its good name that its influence may be felt in the community more and more.

After the Address, the President announced the following Committees:

On Credentials.

C. W. Chamberlain, M.D., *ex officio*. Lowell Holbrook, M.D.

Unfinished Business.

W. H. Carmalt, M.D. W. J. Beach, M.D.
C. H. Bill, M.D.

On County Resolves.

L. J. Sanford, M.D. E. P. Swasey, M.D.
S. G. Risley, M.D.

On Business.

C. W. Chamberlain, M.D., *ex officio*. N. E. Wordin, M.D.
C. J. Fox, M.D.

On Honorary Members and Honorary Degrees.

A. Woodward, M.D. C. H. Hubbard, M.D.
M. B. Bennett, M.D.

Auditing Committee.

D. A. Cleaveland, M.D. R. S. Goodwin, M.D.

To nominate Essayists.

H. S. Fuller, M.D. W. G. Alling, M.D.
O. Brown, M.D.

The following amendment to the By-Laws was reported upon favorably by the Committee on Unfinished Business through the Chairman, Dr. W. H. Carmalt. It was introduced last year as a County Resolve, and favorably received.

CHAPTER III, Sec. 6. It shall be the duty of the Clerks of the several County Associations to procure for the Annual Convention short obituary sketches of deceased members, which shall be revised, amended, or condensed by the Committee of Publication as they deem expedient. *In case however, of any considerable changes in obituary sketches, either in revising, amending, or condensing, said sketch shall be submitted to the writer before publication in the Proceedings.*

On motion of Dr. Chamberlain, the report of the Committee was accepted, and the Committee discharged. A recess was then taken for the Fellows of each County Association to appoint a member of the Committee to nominate officers for the ensuing year. The following were appointed:

- H. S. Fuller, M.D., Hartford County.
- W. H. Carmalt, M.D., New Haven County.
- F. N. Braman, M.D., New London County.
- Wm. C. Wile, M.D., Fairfield County.
- Lowell Holbrook, M.D., Windham County.
- R. S. Goodwin, M.D., Litchfield County.
- C. H. Hubbard, M.D., Middlesex County.
- E. P. Flint, M.D., Tolland County.

The Convention was then called to order to listen to the reports of special committees appointed at the last Convention, as follows :

- On Medical Experts, G. W. Russell, M.D.
- On Sale of Poisons, R. Baker, M.D.
- On Vital Statistics, M. White, M.D.
- On Lunacy Commission, A. M. Shew, M.D.

These reports will be found immediately after the Minutes of the proceedings, as they are rather long to be inserted here.

After the report of Dr. White, Dr. Hubbard of New Haven spoke of certain abuses in publishing names in connection with registration reports. Dr. Burke stated that a similar custom prevailed at Norwalk. Dr. Chamberlain stated that the State Board of Health would do all in their power to prevent such abuses, but could not hinder any one from consulting the public records, as that was a right over which they had no control. Dr. Cleveland spoke of certain violations of law in Middletown. Considerable debate followed, participated in by Drs. Hubbard, Cleveland, Burke, Mayer, and Chamberlain, in which it appeared that the existing laws if enforced are sufficient to prevent most of the abuses complained of.

On motion of Dr. Burke, seconded by Dr. Hubbard of New Haven, the following resolution was passed.

Resolved, That this Society request the State Board of Health to call the attention of the Registrars of Vital Statistics in each town to certain abuses, and if necessary, secure additional legislation to prevent them.

After the report of Dr. Shew was read, a minority report signed by one out of the three members of the committee was read by Dr. Cleaveland. On motion of Dr. Chamberlain both reports were laid upon the table, as the hour was late and there was considerable business that must be transacted that day, as there would be no evening session. It was afterwards voted to print both reports. They will, therefore go to the next convention as unfinished business.

The report of the treasurer was then presented and referred to the Auditing Committee, with its accompanying vouchers. After examination by the committee, they reported it as correct. Their report was accepted, and the treasurer's report ordered on file. The following is a summary :

May, 1880, balance in Treasury,	-	-	\$282.90
Received during fiscal year 1880,			520.94
			<hr/>
			\$803.84
Expenditures, 1880,	-		420.60
Balance in Treasury,			383.24
Excess of receipts over expenses,		-	100.34
Decrease of expenses from 1879,			99.09
Decrease of receipts from 1879,			24.00

Indebtedness of the Several Counties for the Tax Laid in 1880.

Hartford County, Jas. Campbell, Jr., M.D, Clerk,			none.
New Haven County, C. W. Gaylord, M.D.,	"	-	\$ 67.96
New London " A. Peck, M.D.,	"	-	7.34
Fairfield " F. M. Wilson, M.D.,	"		12.00
Windham " R. Robinson, M.D.,	"		none.
Litchfield " J. J. Newcombe, M.D.,	"		6.00
Middlesex " Wm. S. Miller, M.D.,	"		none.
Tolland " G. H. Preston, M.D.,	"		none.

This report, although not quite as good as that of last year, is still with the exception of that the best I have made; the im-

provement in the returns is marked, the same counties as last year report no indebtedness, and the habit of prompt payment is becoming established permanently in several, while the others show a similar spirit for the most part, with still a few delinquents. If these realized how much annoyance they caused, there would be no longer tardy payments. The clerks of the county societies generally deserve hearty commendation for their efforts, and, as before stated, the society is to be congratulated upon the efficient organization of the county associations in this department.

The Committee on County Resolves reported that no business had been submitted to them that was in order for them to receive.

The Committee on Examination presented a report through Dr. Fuller. (See Appendix A.)

The Nominating Committee reported the following officers for the ensuing year, 1881-1882, and they were accordingly elected.

President, Wm. Deming, M.D., Litchfield.

Vice-President, Wm. G. Brownson, M.D., New Canaan.

Treasurer, F. D. Edgerton, M.D., Middletown.

Secretary, C. W. Chamberlain, M.D., Hartford.

Committee on Matters of Professional Interest in the State.

W. A. M. Wainwright, M.D., L. S. Wilcox, M.D., Hartford, Geo.
F. Lewis, M.D., Bridgeport.

Committee on Examination.

Orlando Brown, M.D., Elijah Baldwin, M.D.

Committee to Nominate Professors to the Medical Department of Yale College.

Isaac G. Porter, M.D., M. B. Bennett, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

C. H. Bill, M.D., S. G. Risley, M.D.

Committee of Publication.

C. W. Chamberlain, M.D., *ex-officio*, F. D. Edgerton, M.D., *ex-officio*,
Irving W. Lyon, M.D.

Committee of Arrangements.

Francis Bacon, M.D., *Anniversary Chairman*, J. F. C. Foster, M.D.,
Jas. K. Thacher, M.D.

Dissertator—N. Nickerson, M.D.

Alternate—C. J. Fox, M.D.

Delegates to the American Medical Association, 1882.

A. Woodward, M.D., Geo. Clary, M.D., Wm. Woodruff, M.D.,
T. M. Hills, M.D., A. D. Barber, M.D., W. L. Bradley, M.D.,
S. G. Risley, M.D., R. W. Griswold, M.D., A. M. Shew, M.D.,
W. O. Ayres, M.D.

Delegates to the Maine Medical Society.

N. Nickerson, M.D., T. G. Wright, M.D.

Delegates to New Hampshire Medical Society.

F. S. Crossfield, M.D., E. P. Bennett, M.D.

Delegates to the Vermont Medical Society.

H. G. Howe, M.D., S. H. Chapman, M.D.

Delegates to the Massachusetts Medical Society.

D. A. Cleaveland, M.D., M. V. B. Dunham, M.D.

Delegates to the Rhode Island Medical Society.

C. M. Carleton, M.D., Wm. A. Lewis, M.D.

Delegates to the New York Medical Society.

B. S. Thompson, M.D., S. B. St. John, M.D., Wm. C. Burke, Jr.,
M.D.

Delegates to the New Jersey Medical Society, 1882.

E. B. Lyon, M.D., C. P. Lindsley, M.D.

Delegates to the Pennsylvania Medical Society, 1882.

E. C. Kinney, M.D., Alfred North, M.D.

LONG BRANCH, N. J., May 25, 1881.

To G. L. Platt, M.D., President of Connecticut Medical Convention,
City Hall:

The Medical Society of New Jersey, now in session at Long Branch, sends its fraternal greeting to your society. We regret that no delegate from your State is present with us.

W ELMORE,

Corresponding Secretary.

The preceding telegram was received from the New Jersey Medical Society, in session at Long Branch. The Secretary was directed to reply, and extend the greetings of the Connecticut Medical Society, sharing also the regret that no delegate from the New Jersey Society was present at our convention.

On motion of Dr. Cleaveland the report of Dr. Shew on a Lunacy Commission was ordered printed.

On motion of Dr. Shew the minority report of Dr. Cleaveland was ordered printed.

On motion of Dr. Chamberlain, seconded by Dr. Kinney, the usual tax of two dollars, payable on and after June 1st, 1881, was laid upon each member of the Connecticut Medical Society.

It was voted that seven hundred copies of the Transactions of 1881 be printed.

On motion of the Secretary, seconded by Dr. Burke, it was voted that the Secretary be directed to prepare and publish an alphabetical list of the members, with their post-office address, the same to be printed after the usual list by counties.

The following resolution, introduced by Dr. Wordin, and seconded by Dr. Goodwin, was passed unanimously:

Resolved, That it is the sense of this society that Fellows can only be elected by ballot by the various county societies, and that there is no power of substitution conferred by the constitution and by-laws.

The Committee on Business reported the programme for the following day, and that no further business had been submitted to them. The Committee on Honorary Members and Honorary Degrees reported the name of Dr. Pliny Earle, of Northampton, for honorary membership of this society. By rule it lies over one year before action is taken upon it. They reported that no candidates for honorary degrees had been brought before them.

The Committee to nominate Professors at the Medical Department of Yale College reported as follows:

The Committee to nominate Professors to the Medical Department of Yale College report that at a meeting held at New Haven, there were present on the part of the society, C. H. Pinney, M.D., of Derby; Isaac G. Porter, M.D., of New London; R. S. Goodwin, M.D., of Thomaston.

With the advice and approval of the President and Faculty of Yale College, the following gentlemen were elected professors in the Medical Department of Yale College: Dr. F. M. Prudden and Dr. F. E. Beckwith.

Attest:

R. S. GOODWIN, M.D.

The convention then adjourned to meet the fourth Wednesday in May, 1882, at New Haven.

C. W. CHAMBERLAIN, M.D.,
Secretary.

THE ANNUAL CONVENTION

Of the Connecticut Medical Society (Mass Meeting) was held in the Common Council Chamber, City Hall, Thursday, May 26th. The convention was called to order at 9:30 A. M., by the President elect, Dr. William Deming, of Litchfield. The first business in order was the report of the Secretary, as follows:

The year has been marked by the same general features that have been characteristic of the last few years, a steady growth in numbers and of interest in the society. Although during the last six years the average death-rate has been ten each year, the new members have not only made up the loss, but caused a steady gain; so that the society now numbers four hundred and thirty. The number last year was printed wrongly; it should have been four hundred and twenty. The society loses eight by death and fourteen by removal. There are thirty-two new members, leaving a net gain of ten. This may be slightly increased, as some of the removals are from one county to another. The society now includes within its fold nearly every reputable practitioner in the State. The growth in Fairfield county has been most marked. From 45 members in 1876, it has increased to 71 in 1881; and the increase in interest and in attendance upon their county meetings and those of the State Society has been no less marked. From one of the poorest paying societies it has changed to one of the best, as can be seen by the reports of the last two years. The latter is largely due to the efforts of the clerk, Dr. F. M. Wilson, of

Bridgeport, as that is the officer upon whom the duty of collection falls.

The new members are distributed among the several County Associations as follows: Hartford, 5; New Haven, 12; Fairfield, 10; Litchfield, 1; Middlesex, 4. The list of new members is somewhat larger, as it includes several that were members of the State Society but have removed from one county to another, and thus are new members of that County Association while not enumerated in the count of new members.

The following is the list of new members:

- Cressey, Noah, M.D., Berkshire, 1862, Hartford.
 Welch, Geo. K., M.D., College of Physicians and Surgeons, N. Y., 1878, New Britain.
 Weaver, C. H., M.D., (Baltimore Coll. Physicians and Surgeons, 1879,) N. Manchester.
 Mead, E. H., M.D., Univ. Mich., 1878, Berlin.
 Finch, Geo. T., M.D., Bellevue, 1877, Thompsonville.
 Smith, Heman B., M.D., Yale, 1876, New Haven.
 Doutteit, Henry, M.D., Yale, 1879, New Haven.
 Surridge, Charles G., M.D., Yale, 1879, New Haven.
 Heady, E. B., M.D., Yale, 1872, Milford.
 Augur, Geo. J., M.D., Yale, 1879, New Haven.
 Russell, Wm. Spencer, M.D., Yale, 1880, New Haven.
 Oakes, H. A., M.D., Coll. Physicians and Surgeons, N. Y., 1878, New Haven.
 Frost, C. W. S., M.D., Coll. Physicians and Surgeons, N. Y., 1880, Waterbury.
 Eggleston, J. D., M.D., Coll. Physicians and Surgeons, N. Y., 1879, Meriden.
 Wolcott, Willard, M.D., Harvard, 1879, Waterbury.
 Swift, Edwin E., M.D., Univ. N. Y., 1880, Hamden.
 Atwater, C. H., M.D., College of Physicians and Surgeons, N. Y., 1871, Wallingford.
 Wright, Frank W., M.D., Bellevue, 1880, Hamden.
 Benedict, Geo. W., M.D., Coll. Physicians and Surgeons, 1879, Norwalk.
 Hungerford, Harry, M.D., Coll. Physicians and Surgeons, 1880, Norwalk.
 Lacey, Wm. F., M.D., Yale, 1844, Danbury.
 Wildman, Henry G., M.D., Coll. Physicians and Surgeons, N. Y., 1880, Danbury.

Adams, A. E., M.D., College of Physicians and Surgeons, 1880, Danbury.

Rice, F. A., M.D., Bellevue, 1874. Bridgeport.

Bragg, James D., M.D., Albany, 1867, Bridgeport.

Wright, J. W., M.D., Univ. Med. Coll. N. Y., 1880, Bridgeport.

Hill, Seth, M.D., Yale, 1866, Stepney.

Lyons A. W., M.D., Columbus Med. Coll. Ohio, 1876, Monroe.

Gilbert, C. H., M.D., University N. Y., 1880, Morris.

Miller, W. S., M.D., Yale, 1879, Clinton.

Gilbert, Chas. H., M.D., Univ. Med. College, N. Y., 1880, Essex.

Calef, J. Frank, M.D., Yale, 1880, Middletown.

They are divided amongst the Medical Colleges as follows: Yale, 10; College of Physicians and Surgeons, New York, 9; College of Physicians and Surgeons, Baltimore, 1; University Medical College of New York, 4; University Medical College of Michigan, 1; Bellevue, 3; Berkshire, 1; Harvard, 1; Columbus, Ohio, 1; Albany, 1.

The following members have died during the year: B. S. Roath, M.D., Norwich; A. W. Coates, M.D., Mystic River; Edward Bulkeley, M.D., Stephen H. Bronson, M.D., New Haven; John Hill, M.D., South Norwalk; N. D. Haight, M.D., Stamford; J. B. Whitcomb, M.D., Brooklyn; L. N. Beardsley, M.D., Milford.

The following letters were then read by the secretary:

THOMASTON, May 24, '81.

Dear Dr. Chamberlain:

A near relative of my family has just died, and as the funeral will take place on the day of the Convention, it will be impossible for me to be present. I write this on account of your kindness in continuing my appointment as essayist, and regret to fail the second time. But death, as well as time and tide, wait for no man.

Remembering all your courtesies, I am

Ever yours,

W. WOODRUFF.

NEW YORK, June 8, 1880.

DEAR DOCTOR:—I beg leave to acknowledge the receipt of the certificate of honorary membership in the Connecticut Medical Society, which you sent me.

I am fully sensible of the high honor thus conferred upon me, and I beg that you will express to the society my grateful thanks.

I have many professional friends in the State of Connecticut, and it will give me great pleasure to participate in their annual reunion.

Believe me very truly yours,

E. C. SEGUIN.

DR. C. W. CHAMBERLAIN,

Sec'y. Conn. Medical Society, Hartford.

GARDEN CITY, L. I., June 7, 1880.

Dr. C. W. Chamberlain, Secretary Connecticut Medical Society, Hartford, Conn. :

DEAR SIR:—I have the honor to acknowledge the receipt of your communication of 29th ult., containing certificate of my election to honorary membership of Connecticut Medical Society. It affords me great pleasure to accept this honor—the more for the reason that in Connecticut I laid the foundation of, and there began my professional studies; in Connecticut I obtained the partner of my life; from Connecticut—during a temporary residence—I was commissioned an Assistant Surgeon in the Navy, which office afforded me my best opportunities for acquiring a knowledge of preventable diseases; and to Connecticut I always turn my thoughts in memory of the joys of my life.

Be assured, my dear sir, that whatever of life remains to me will be spent in a continued effort to maintain the honor which the Medical Society of Connecticut has conferred upon me in recognition of my humble efforts to advance the interests of the medical profession.

Please also accept my grateful acknowledgment of the kindly sentiments of your letter conveying the certificate.

Truly yours,

A. N. BELL.

The usual annual address of the President was omitted this year on account of the absence of Dr. Platt in Europe to regain his health, injured by too close application to his professional duties.

In the absence of Dr. Wainwright, Chairman of the Committee on Matters of Professional Interest in the State, the report was presented by Dr. L. S. Wilcox. The invasion of small-pox was commented upon, the history of epidemic diseases as given in the report of the State Board of Health commended, and a resumé of the answers to the questions on Consumption, sent out by the committee given. After remarks by Dr. Lindsley and others, the report was referred to the Committee of Publication.

The following gentlemen were introduced to the convention, and presented the congratulations and greetings of their respective societies :

Dr. Robert Dixon, Damariscotta, Maine, Dr. T. W. Perry, from Rhode Island.

The following gentlemen were present as guests of the Convention: Dr. Pliny Earle, Northampton, Mass.; Dr. A. R. Smart, Hudson, Mich.; Dr. Paul Mundé, of New York city. Dr. E. C. Seguin, the distinguished neurologist, of New York, an honorary member of the society, was also present during the convention.

Dr. L. H. Wood, a delegate to the American Medical Association at Richmond, gave a brief report of his visit to that society. The Convention then listened to an able and exhaustive essay on The Importance of the Early Recognition of Epilepsy, by E. C. Seguin, M.D., of New York. The thanks of the Convention were unanimously voted to Dr. Seguin, and a copy of the essay requested for publication.

Dr. S. B. St. John, of Hartford, then read a very interesting essay on Sympathetic Ophthalmia, and at the close exhibited a magnetic instrument for the extraction of particles of iron or steel from the eye. The power of so small a magnet was remarkable, as shown by its suspending several hundred times its own weight. An electro-magnet was also shown not as convenient, as the wires were often in the way. The thanks of the convention were voted Dr. St. John, and the essay referred to the Committee of Publication.

Dr. Henry Fleischner, of New Haven, then read an essay on Non-Pharmacological Therapeutics, in which he discussed many valuable remedies yet non-official. The essay was listened to with marked interest, a copy requested for publication, and the thanks of the Convention voted Dr. Fleischner.

Dr. C. B. Newton, of Stafford Springs, then read a very able and interesting essay on the Influence of Temperature upon the Respiratory System. The thanks of the Convention were voted Dr. Newton, and a copy of the essay requested for publication.

Dr. J. H. Granniss, of Saybrook, then read an essay on Treatment of the Third Stage of Abortion. The thanks of the Convention were voted Dr. Granniss for his very interesting and instructive essay, and it was referred to the Committee of Publication.

Dr. M. D. Mann, of Hartford, then presented a very instructive clinical paper on Lacerations of the Cervix. The thanks of the Convention were voted Dr. Mann, and the paper was referred to the Committee of Publication.

This paper was followed by very interesting remarks by Dr. Paul Mundé, illustrated by plates in chromo-lithography, from a recent essay of his upon the same subject. The reflex neuralgia of Emmett, which has thrown undeserved discredit upon the

operation, was described, and the influence of lacerations in producing retroversions was discussed. Chronic peritonitis, although a contra indication, was not to be considered as such invariably. In one case he had cured the peritonitis by the operation for the laceration, chorea, paraplegia and insanity, had all been found due to lacerations of the cervix. The proportion of cases in parous women, he stated to be $22\frac{6}{10}\%$. Pallen says 45%, Emmett more than 33%. In 1,269 parous women he had found 290 cases of lacerated cervix, about 60 of which required an operation. The effect of this lesion on the female organization cannot be over-estimated. It is only in cases of senile uterus near the meno pause or when the surface heals over that no ill-effects are produced. In a very small percentage of cases bad results like pelvic cellulitis have followed the operation.

Dr. Cressy, of Hartford, was unavoidably absent on account of the severe illness of a near relative. The paper was read by title and referred to the Committee of Publication.

Dr. Wm. C. Burke, Jr., of South Norwalk, read a very valuable essay on Lacerations of the Perineum. The thanks of the Convention were voted to Dr. Burke, and the paper referred to the Committee of Publication.

Other voluntary papers were read by title only, and referred to the Committee of Publication.

The following gentlemen were reported by the committee as essayists for the Convention of 1882 :

M. D. Mann, M.D., Hartford, Geo. S. Porter, M.D., Bridgeport.
 C. P. Lindsley, M.D., New Haven, W. J. Beach, M.D., Litchfield,
 F. N. Braman, M.D., New London, J. G. Gregory, M.D., Norwalk,
 John Cotton, M.D., Woodstock.

The Convention then adjourned for the annual dinner at the United States Hotel.

C. W. CHAMBERLAIN, M.D.

Secretary.

REPORT

OF THE COMMITTEE ON MEDICAL EXPERT TESTIMONY.

The committee appointed last year to consider the subject of medical expert testimony beg leave to report that they have given the subject careful consideration, and regret to find that they can suggest nothing of such positive or practical value as they and perhaps others anticipated. The necessity for some improvement is admitted by all; but the way to procure the improvement is not very clear, nor will it be considered entirely satisfactory. When a great evil exists, and is universally allowed to exist, its removal and a proper substitution for it would seem to be easy of accomplishment. "Where there is a will there is a way" has passed into a proverb, and is true in most of the affairs of life. If everything in legislation and in our conduct and intercourse were dependent upon the will of one man, the proverb might be true now. But as changes are to be made according to fixed forms and customs, so these must be followed in the main, or else the changes are not effected.

The English-speaking peoples have certain ideas of rights and liberties which, even under dissimilar governments, they cherish as sacred, and which they will not, and in all probability never will, consent to see abolished or very much impaired. The religious feelings, the steady, active, persistent habits, the intense energy of will and action, the industry, frugality, love of family and love of country, have never been and never will be excelled by any other race. These striking characteristics of this English race will influence in time all the nations of the world, and are now influencing them more than all other races together. An intense love of liberty, liberty of the common people, liberty and rights of the oppressed, a desire to see that the criminal even is justly protected, may be said to belong more to this race; and though in the past centuries this spirit may at times have been forgotten, and we may be led to exclaim with Madame Roland, "O, Liberty, what crimes have been committed in thy name!" yet the

principle of law and common rights has never been utterly forgotten or wholly laid aside. These principles have come down to us intensified and increased. The common law of England dominates our courts, our legislation, our customs; it is interwoven into our common methods of thought—into our habits; it is so entirely incorporated into all “we do or say, or think, or dream,” that to throw this common law aside would be to change us utterly—to take away from us our pride and strength. So we go on, century after century, suffering evils which we admit should be corrected, and do endeavor to correct them, in a roundabout way; and so do not abolish or ignore the great principle of liberty, or rights of man, and the equal right of all men before the law.

All nations have their characteristics, and gradually come to enjoy those rights and privileges which seem best suited to them. That procedure in courts which is practiced in France would never be followed by the English race: the judge is placed too much in the position of a prosecuting officer. While with us he is supposed to be unprejudiced, and to hold a just balance between parties, he would lose that position at once, and appear as an attorney, did he with us so prominently appear in getting at the evidence. The law may be as sound as with us, but the course of procedure would lead us to distrust it. The German law, which allows the appointment of medical experts and the assignment to them of certain questions, has something of value in it, and may be suited to the German nation, and may possibly in some points be accepted by us in the future; but it will never be accepted by the English race in its totality, or as allowed to infringe upon the natural, fundamental, common-law and common-sense right of an accused person to bring his own witnesses into court, to confront and freely question all witnesses, and, however many experts may have testified, to bring his own, as many as he is able or thinks proper. This right accords with the English notion of “fair play,” and never will be conceded or essentially modified. It is his right, and cannot be taken away from him; no statutory legislation can reach it.

It is admitted that great evils come out from this, when we see how often the privilege is abused, and what escape it affords to criminals; and we may be led sometimes to say, “They do these things better in France.” But we see, as the basis and foundation of this procedure, the rights of the common man, and forgive the special evil through love of the great principle.

So, as far as we can see, there is no prospect of a change in the calling of medical experts, and whatever evils there are attending the present methods, the changes or remedies must be brought about in some other way.

Who is a medical expert? The common-sense answer would seem to be, some one who is skilled in the special matter in which he proposes to testify. Of course, some men are more skilled than others. If, from natural inclination, habits of thought and study, they have devoted much time to the investigation of special subjects, they may naturally be supposed to be more conversant with such subjects; able to testify more truthfully and positively. It is not every practitioner in medicine who can truthfully be called an expert in this science in all its branches. While many might truthfully be called experts in many of the diseases which the physician is continually called to treat, and might have a fair understanding of mental diseases and the fundamentals of chemistry, yet the great majority would probably shrink from swearing as positively true certain abstruse points in psychological medicine, or that their researches in chemical analysis were absolutely true, and that by these the life of a prisoner should be taken. He might have a certain confidence in his own skill, but it could hardly be called the confidence of an expert.

It is apprehended that some of the unsatisfactory exhibitions which have been made by medical men, in our courts, have been made by those who have claimed, or have appeared to claim, more of skill than was fairly their due. Lawyers seize quickly upon this, and by coaxing, brow-beating, and putting of questions which are most provoking in their nature, and which no one can answer, fairly drive a modest physician into a state little short of frenzy.

But it is not alone the unskilled expert who brings discredit upon himself and his profession. The skilled expert is not always infallible, and if he loses his temper, and claims to show as absolute, indisputable facts what are only opinions; that is, certain facts being admitted, such and such deductions are certain, and may be sworn to as truths; why, he claims for his opinions—that is, his human deductions—on equality in value with facts themselves. All this may be true—the expert may be right; but he may be wrong also, for human judgment is fallible. Of course, a consideration of all the facts in a given case may strengthen and corroborate the testimony of the medical expert; but this consideration is not permitted to him. He is required to give his opinion only

upon the medical examination of the case, and required to give it in most precise and positive terms, often utterly impossible. And then we look at the same matters so differently—whether from different mental organization, or course of study, or process of reasoning—that it is not unusual to find very learned men conscientiously on opposite sides of the very same points. If a half dozen of ordinary physicians will not always agree upon the necessity of so simple a matter as the movement of the bowels of a patient, why, the most skilled among us may be pardoned for not always being in agreement upon some profound point in psychology or the true action of poisons. The point which should be had in remembrance is this, however: the only difference in both cases is one of judgement.

But if there are any cases which are deserving of condemnation, it is when the expert allows himself to become the advocate of a party. Here, supposed to be speaking a scientific truth, he speaks it with a bias, or so far only as it will benefit a side. Having in no sense “a judicial mind,” or if he has it, not displaying it, he testifies for a party and becomes an advocate. Then his condition “is of all men most miserable,” and he sinks into as general contempt as the expert who openly offers his talents for sale in any case in which he may be called. Such a man would justify himself by saying that he had as good a right to find a market for his opinions as an advocate. The advocate, however, is supposed to believe his client to be innocent until he is proven to be guilty, and so justifies his actions; but the expert is supposed to have no client, even though called by a party, but is expected to state only what are undoubted facts, or reliable and generally-received deductions. The cases are not parallel, and no one with an honest mind would ever think of making them appear so.

That dyspeptic philosopher, Carlyle, referring to a celebrated case in which Jeffrey had been engaged, in which, through his great skill, he had procured the discharge of an undoubted murderess, says: “Advocate morality was clearly on his side. It is a strange trade, I have often thought, that of advocacy. Your intellect, your highest heavenly gift, hung up in the shop-window like a loaded pistol for sale; will either blow out a pestilent scoundrel’s brains, or the scoundrel’s salutary sheriff’s officer’s (in a sense), as you please to choose for your guinea!” When a medical expert offers his intellect for sale in like manner, then is he deserving of greater condemnation.

It is the opinion of some learned legal gentlemen, that the best intentioned medical expert cannot always preserve a strict independence; the cross-questioning by sharp lawyers may drive him into seeming contradictions, and the case which he ventured upon with the most honest intentions and with a firm determination to investigate in a spirit of candor and justice, is made to appear as one in which he has misused his talents, and for a pecuniary consideration has testified so incorrectly that his testimony is worthless. Such a lawyer is occasionally well met by a bold, impudent and not very learned physician, who, fearless, and without troublesome scruples, sets the "criminal lawyer" fairly at defiance. If, like the famous feline contest, it should end in mutual destruction, there would be little cause for grief.

Dr. Johnston, in an address before the Medical and Chirurgical Faculty of Maryland, 1877, says, "As the law now stands, *experts* are or may be called through compulsory process into court by prosecution, defence, or both, and are not by the court itself, which manner of calling has permitted the employment of the expression "in whose favor they appear." But "*he* should not," says Washburn in his paper upon "Testimony of Experts,"—"he should not be selected as the witness of this party or that, or to represent this party or that, of the matter in controversy. He should be like an arbitrator or commissioner, who, standing indifferent between the parties, is to hear the facts which they have to offer; and then by applying his own knowledge as a man of science to form an opinion and declare it, as a guide for the court and jury in forming a final judgment in the case."

It may be assuming too much to suppose that such a perfect man, wholesome in all his ways, will always be found in the position of a witness upon the stand, when possibly a like one is not always to be found at the bar, or upon the bench itself.

This subject of Medical Expert testimony was before our Society in 1872, and a committee was appointed to consider it. Governor Jewell referred to it in his message of the same year, and some action was taken upon it. The Committee on the Judiciary, while admitting the evil complained of, did not think it expedient or possible to remedy the matter by legislation. A gentleman who was familiar with the proceedings at that time writes, "The study and reflection which I have been able to give the general subject of reform in the matter of the practice of the courts in this particular, and also as to that of medical expert

testimony, have convinced me that no reform is possible to be had by statutory regulations, until all lawyers are excluded from the legislature. Such a reform as is needed would deprive lawyers of a certain class of a great part of their effective ammunition, in the defense of persons who are justly chargeable with capital crimes. The innocent have no need of such services as lawyers can render through the agency of mercenary medical shysters, who are "experts" only in the facility with which they can make their testimony meet the requirements of their employers. . . . Before going further, let me say that I agree with you when you say it is "difficult to suggest anything of great practical value, that can be made to vary essentially the methods pursued in our courts." Perhaps the only approach to such a standard as is desirable, and can be hoped for, must be sought through the greater or less degree of elevation of character, attainments in knowledge, and the incorruptible integrity of individuals in our profession—supported as it is eventually to be by a more enlightened public opinion. I do not agree with the opinion that the "expert cannot be called by the court;"—only statute law is required to make it possible; this being however unattainable, there actually remains only the possibility of reaching the desired end through the slow growth and fruitage of the higher virtues—those which distinguish the highest types of man from the lowest orders. There are lawyers like ——— whom you quote, who are able to see this enormous evil in its worst features, and deprecate the agency which their profession has had in securing its existence. We will hope for a better, purer practice in the future, and we must use all our influence to elevate and purify our own professional body."

As far as your Committee can see, the only remedy for a better condition of Medical Expert testimony lies with the profession itself. In elevating its general tone, encouraging learning and devotion to study, a high personal sense of honor, and of the worth and dignity of the body, with a determination to do nothing unworthily, making the expert an honest, learned, reliable, common sense man; this seems to be about the extent of our remedial measures. It is another instance, where great things are hoped for from special legislation in our profession, as if special legislation alone could eradicate great evils at any time, when the foundations of the same have been laid long, firm, and deep. Something more than mere law is required to make men honest, reliable and lovable.

While we endeavor to reform ourselves, we should not hesitate to condemn the soldiers of fortune who as experts are willing to sell their talents to one side or another, without regard to truth. They are generally regarded at about their true value, and there is probably little danger that, under the vigilance of opposing counsel, and the rulings of a wise judge, the crude, silly, and purchasable opinions of mercenary doctors will have undue weight with a jury of sensible and true men.

We have not considered it advisable to refer to the many instances in which medical expert testimony is necessary, whether in civil or criminal cases, for these are all to be found in the books. Nor have we referred to noted trials in which distinguished medical experts have widely differed in their opinions, and have not always appeared to the best advantage. We have found ample opportunity to say all that was necessary, in speaking upon general principles; and so, avoiding anything which could be considered as personal, whether in the State or out of it, have made our remarks, we hope, worthy of general approval. There ought to be a better feeling, a more generous bond of sympathy between the legal profession and our own, than does now exist. We can do much ourselves to make it better, and the lawyers can do much also, if they desire. The hearty, united efforts of the best men in both professions ought to bring a change in the present unfortunate condition of things. It is no credit to any two professions of learned men that there should be such a feeling of hostility or antagonism. Very few physicians now go upon the witness stand with an expectation of receiving fair treatment, and apparently very few lawyers consider the medical expert only as one who is to be harried and plucked. When both parties come to recognize the necessity of a change in these matters, how much better an agreement will be for the public and all concerned; when the expert is content to speak only the honest truth, and the lawyer to seek only for the honest truth, then there will come about a better and more pleasant feeling than now prevails.

GURDON W. RUSSELL, M.D.,
STEPHEN G. HUBBARD, M.D.,
WM. DEMING, M.D.

HARTFORD, May 25, 1881.

REPORT

OF COMMITTEE ON SALE OF MEDICINES AND POISONS.

Of the committee to whom was referred so much of the last annual address of the President of this society, as relates to the "free and unlimited sale of poisons, especially those used for suicidal and criminal purposes;" one of our number, Dr. S. H. Bronson of New Haven, has suddenly passed from a busy life to his reward. The surviving members beg leave to report, that we have given the subject some attention, and are free to acknowledge that the more we have thought on the subject of poison laws, the more difficult the problem appears. The facts being, so far as we can learn from prominent men in states where what are thought to be good poison laws exist, that those who want to use poisons for either of the unlawful purposes named are seldom or never prevented, and not often materially obstructed by any law yet devised; but all the laws seem to have been very useful in preventing accidents through carelessness and ignorance in using hurtful substances. *We think* that if the law is such as to require the registration of the sale of poisons generally used for the purposes indicated, the fact of such registration drawing the attention of the salesman directly to the purchaser, if his intent is evil, that fact alone ought to deter him from carrying out his purpose. Since our appointment, an act has been passed by our legislature, entitled "An Act to regulate the sales of Medicines and Poisons," which contains a clause that covers a limited number of poisons, viz.: Arsenic, Strychnine, and Prussic Acid. If that list can be properly enlarged, we think that the law will accomplish all that can be done by legislation, and yet it is so difficult to define a poison with any degree of useful precision and accuracy, and if all substances that are dangerous to health and life, are registered when sold and labeled "poisons" to cover the possibilities of their misuse, it takes away the force of the word as applied to those which come within the probabilities of accident or misuse. Your committee would therefore recommend, that measures be taken

by this society, to petition the next legislature to enlarge the list of poisons enumerated in section 10 of the act passed at the last session, requiring the seller to "affix to the package sold by him a label, plainly marked with his name and date of sale, and the word 'poison,' and shall enter in a book kept by him for that purpose, the name of the purchaser, the date of sale and the quantity sold."

The list as enlarged, comprising Arsenic and its preparations, Corrosive Sublimate, White Precipitate, Biniodide of Mercury, Cyanide of Potassium, Hydrocyanic Acid, Oil of Bitter Almonds, Strychnine, Morphine, and Opium in quantities of more than two grains; and subjecting the sale of the following articles to the same rules except when prescribed by a practicing physician, with his name attached to the prescription in his handwriting, substituting for the word "poison" on each package sold, the word "Dangerous," viz.: Belladonna, Aconite, Conium, Cantharides, Colchicum, Creosote, Cotton Root, Ergot, Digitalis, Henbane, Nux Vomica, Saviue, and their pharmaceutical preparations—Croton Oil, Chloral Hydrate, Chloroform, Carbolic Acid, Oil of Tansy, Oxalic Acid, Sulph. Zinc, Acetate of Lead, and all liquid preparations of the above articles, Phosphorus, Cannabis Indica, and their preparations, also Mineral Acids; and the seller shall not deliver any of the aforesaid poisonous articles without satisfying himself that the purchaser is aware of its poisonous character, and that the said poison is to be used for legitimate purposes, also that the poisonous substances first enumerated, viz.: Arsenic and its preparations, Corrosive Sublimate, White Precipitate, Biniodide of Mercury, Cyanide of Potassium, Hydrocyanic Acid, Oil of Bitter Almonds, Strychnine, Morphine, and Opium, in quantities of more than two grains, shall be kept in any pharmacy store where medicines and poisons are sold at retail, or where physicians' prescriptions are dispensed, in separate compartments exclusively devoted to their keeping, and inaccessible to the public.

All of which is respectfully submitted.

RUFUS BAKER, M.D.,
WILLIAM DEMING, M.D.

The committee to whom was referred so much of the President's Address of last year, as related to the preservation of Records of Vital Statistics, would offer the following report, viz:

The duties of the State Board of Health are chiefly to investigate subjects relating to the public health, and to communicate to the authorities and to the public such information as they deem important to the public welfare.

They are also authorized to collect and publish statistics relating to Births, Marriages, and Deaths, and generally, to supervise the registration of the same. Recording and preserving the records of such statistics is by law devolved upon officers elected and paid by the several towns of the state. The preservation of these records like the preservation of records of *deeds* belongs of right and by the policy of this state to the several towns.

Yet as the State Board of Health are authorized to supervise and publish vital statistics, your committee believe it would be proper and advisable for that Board to issue a circular, in their Annual Report, calling attention to the great prospective value of these records and the importance of preserving them from loss or injury by fire or otherwise.

The State Board of Health could with propriety and benefit remind Boards of Selectmen in the towns, of the importance of preserving those records with such care as will render loss or injury almost impossible.

In the opinion of your committee no new legislation is needed. The subject is fully covered by the present powers and duties of the State Board of Health.

Respectfully submitted.

MOSES C. WHITE, M.D.,

Chairman of the Committee.

R E P O R T

OF THE COMMITTEE ON THE SUBJECT OF LUNACY COMMISSIONS IN THE UNITED STATES AND FOREIGN COUNTRIES, THEIR "HISTORY, AIMS, AND RESULTS."

In considering the subject assigned to us, we beg leave to report that we have carefully analyzed the resolution under which we act, as well as the resolutions offered to this Society by Dr. Nickerson in 1879.

This course seemed necessary in order to understand clearly the object and aim of the inquiry. As the original resolutions were published in the transactions of this Society two years ago, it will not be necessary to repeat them. Briefly they sought to provide additional safeguards for the insane, "whether in hospitals, private institutions, alms houses, their homes or elsewhere," by having this Society memorialize the general assembly to create by law, a State Board of Commissioners in Lunacy.

After briefly considering the subject these resolutions were referred to a special committee to investigate the subject and report to the next Convention. The President appointed as members of this committee,

Dr. M. C. White, New Haven.

Dr. G. W. Russell, Hartford.

Dr. C. W. Chamberlain, Hartford.

Dr. C. A. Lindsley, New Haven.

This Committee reported in 1880 as follows:

WHEREAS, We consider that our information upon the questions involved in the resolutions referred to us is not sufficiently extensive to enable us to recommend decided action at present, we submit the following resolutions:

Resolved, That a Committee of three, conversant with the history of insanity, should be appointed by the State Convention to investigate the subject of Lunacy Commissions in the other States, as well as in foreign countries, their history, aims, and results, for the information of the next Annual Convention.

The report of the committee was accepted and the committee discharged. The president appointed as members,

Dr. A. M. Shew, Middletown.

Dr. H. P. Stearns, Hartford.

Dr. D. A. Cleaveland, Middletown.

In compliance with these instructions, your committee has corresponded with professional men of standing in every state, with Superintendents of Hospitals for the Insane, and with members of Boards of Charities and Commissioners in Lunacy in the United States, in the British Provinces, and in Europe. From these sources a vast amount of useful information has been obtained, a synopsis of which we give in the subjoined report.

The term, or office, "Commissioner in Lunacy," dates back to 1845, and has its characteristics and powers defined in Lord Ashley's famous Lunacy Act. As thus used, the office belongs to a national Board having jurisdiction of all the insane in Great Britain, whether in public or private institutions or at their homes. These institutions have reached the large number of about two hundred, and the total of insane under their jurisdiction more than 70,000. It thus appears that the magnitude of their work and the importance of the office is so great that the Board has become in fact one of the permanent bureaus of the British Government, whose members,—one half medical and one half legal,—are selected from the highest ranks of these two professions, in a population of 28,000,000, and the annual expense of this department of the government is in round numbers \$200,000.

Now, then, so far as the United States as a nation is concerned, no attempt has been made to follow the example of the British Government, but we find, in careful study of efforts in this direction, that many of the States have taken up the work and adapted it to the changed positions resulting from the altered political conditions.

Hence a word of explanation is necessary at this point. Your Committee in this report refer to "Commissioners in Lunacy," to "Inspectors of State Charities," and to "State Boards of Charities," as a supervisory class of officials, with duties corresponding to those of the British Commissioners, and to those named in Dr. Nickerson's original resolutions. We have come to this conclusion because we find that the Legislative Acts creating these various Boards are copied from the British Lunacy Acts, and invariably refer to the members of these Boards as Commissioners; and in

assigning their duties and powers, give in detail the points suggested by Dr. Nickerson.

The following-named States, twenty-four in number, have no official Boards: New Hampshire, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Florida, West Virginia, Kentucky, Tennessee, Georgia, Alabama, Mississippi, Louisiana, Texas, Arkansas, Indiana, Missouri, California, Oregon, Nebraska, Colorado, and Nevada.

The following-named States, fourteen in number, have regular organized Boards of Charities or Commissioners: Maine, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, Ohio, Illinois, Michigan, Wisconsin, Kansas, Iowa, and Minnesota. The Boards in these States differ somewhat from each other. Their distinctive features will be seen when described at length.

Beginning with the New England States, we find that Maine has a "Board of Visitors," appointed by the Governor, consisting of two members of his council and a woman. It is the duty of this Board to visit the Hospital for Insane monthly or as much oftener as they choose, with keys that will admit them to any part of the institution. They are required to investigate any irregularities and report to the Governor.

This Board was created by act of the Legislature in 1874. Although not called by the same name, your Committee finds that the duties performed by this Board are similar to those devolving upon the Board of Charities in several States.

New Hampshire: Dr. J. P. Bancroft, Superintendent of the Asylum for the Insane at Concord since 1857, writes: "We have not in this State, I am sorry to say, any Commissioners in Lunacy. The poor insane are provided for by the overseers of the towns respectively.

"The county poor are under a Board of Commissioners in each county. There is no general State officer to supervise these several Boards. Indeed, the pauper insane are protected by no law, except those who are committed to the New Hampshire Asylum. The chronic insane poor are wholly in the hands of the County Commissioners, and they dispose of them as they see fit, subject to no State supervision. No law requires these Commissioners to report the admissions or discharges or the condition of the patients at the six or seven County Asylums. A State Board of Charities in New Hampshire would be a good thing, especially if well appointed. The county institutions are in pressing need of such a Board, for the pauper insane are almost as poorly cared for as they were

thirty years ago. We need a State Institution for the pauper insane, and I believe a good Commissioner in Lunacy or a Board of Charities would be obliged to make such a report respecting the condition of the chronic insane in the County Asylums that the Legislature would provide a State Asylum for their care."

Vermont: An interesting letter from Dr. J. Draper, Superintendent of the Asylum at Brattleboro, gives the following information:

"Vermont has a 'Board of "Supervisors" of the Insane,' created by act of the Legislature, 1878. It consists of three members, two of whom are medical men *always*, elected biennially by the Legislature in joint assembly. They report to the Governor and Legislature at each biennial session. They are paid three dollars per day for their actual services and their necessary expenses.

"They are charged with the duty of visiting the Asylums monthly, to examine their condition and the management and treatment of the patients, to hear their grievances and to investigate all cases in their judgment requiring it. They have power to discharge any cases that in their judgment are improperly committed and detained.

"During its three years of existence the Board have recommended the discharge of only four patients."

In conclusion, Dr. Draper cordially commends this Board as having worked well, and much to be preferred to a single commissioner.

To the state of Massachusetts belongs the honor of having first among different states recognized the importance of establishing a closer relationship than had heretofore existed between the public and the public institutions.

The statute of 1863 authorized the formation of the "State Board of Charities" of Massachusetts, requiring the Board to supervise and investigate the whole system of public, charitable, and correctional institutions of the state, and giving it authority to recommend such changes and additional provisions as were deemed necessary in their efficient administration. In 1874 an act was passed providing for the appointment of two "Commissioners in Lunacy." Dr. Nathan Allen of Lowell, and Mr. Wendell Phillips of Boston were appointed Commissioners. The same act provided for the free correspondence of the insane in Asylums. To this end the Superintendents were required to furnish materials for writing, and place in each ward of their respective Hospitals a locked box into which letters were dropped. Over these were posted copies

of the law; keys were delivered to the Secretary of the Board of Charities.

Speaking of the results, Mr. Sanborn, Secretary of the Board, says: "The aggregate of three months for all of the Asylums, has been about 75 letters, and a half a bushel of refuse, consisting of bits of almost every conceivable thing the inmates could obtain and crowd into the openings of the various boxes. I scarcely need add that it is not an agreeable duty to search for letters in this mass of rubbish and filth, but it has been performed as required by law. The correspondence obtained has been addressed to persons in almost every rank of life, from the Queen of England and President of the United States down to the families of the insane state paupers, confined at Tewksbury. The patients of the Hospitals have apparently written as often as they pleased, to whom they pleased, and about whom they pleased. Such of these letters as were not sealed, I have read or tried to read, and I have found in all of them ample evidences that the writers were of unsound mind. At first there was considerable desire on the part of a few patients to write. They caught at the idea as insane persons do at other novelties, but at the second opening of the boxes there were fewer letters than at the first, and it is presumed that the numbers will continue to decrease. The boxes are harmless things and it may be well to let them remain. They furnish a little diversion to minds that are at war with themselves."

By subsequent legislation, additional duties were imposed on the Board and its officers. Notably, the transfer of paupers from certain state institutions to others, and the investigation of complaints of improper detention of insane persons in Lunatic Hospitals and other places.

These Boards were abolished by the statute of 1879, and the present State Board of Health, Lunacy, and Charities was established in its place, with all the old powers, and enlarged jurisdiction in cases of insanity.

Section 5th of this act is as follows:

"Said Board shall act as Commissioners in Lunacy, with power to investigate the question of the insanity and condition of any person committed to any lunatic hospital, public or private, or restrained of his liberty by reason of alleged insanity at any place within this Commonwealth; and shall discharge any person so committed or restrained, if in their opinion such person is not insane, or can be cared for after such discharge without danger to others,

and with benefit to such person. And the members of said Board, in person or by agents, shall visit and inspect every private asylum or receptacle for the insane within the Commonwealth at least once in every six months."

The Legislature of 1879 by the above Act created the first permanent Commission of Lunacy established in Massachusetts.

It will be seen by examining the language of the statute, that it conveys ample power for inspection, investigation, and discharge, and applies throughout the state, wherever insane persons are restrained of their liberty.

Dr. Pliny Earle, Superintendent of the Northampton Lunatic Hospital writes:

"As respects the practical working of the Board, I have taken no pains to inform myself beyond the limits of this institution, and such general knowledge as has come to me unsought.

"Judging from what I know, I believe that the duties of the Board promote the interests of the inmates of the institutions, and the institutions themselves, and of the commonwealth.

"The advantages I believe to be considerable in number, and important in quality. Without entering into the specification of these, it may be sufficient to state that they are such or similar, and comparable to such as in many other spheres of human activity, result from the influence of a single superior authority over a number of inferior or subordinate authorities."

In Massachusetts, no member of the Board, whether officer or not, is paid for his services. The agents or practical officers are paid.

Connecticut: The insane of this State are provided for at the Connecticut Hospital at Middletown, and at the Retreat at Hartford. Both institutions are governed by Boards of Trustees or Managers. At the May Session of the General Assembly, A.D. 1873, an Act was passed establishing a Board of Charities, "consisting of three gentlemen, and two ladies, appointed by the Governor of the State, whose duty it shall be to visit and inspect all institutions in this State, both private and public, in which persons are detained by compulsion for penal, reformatory, sanitary, or humanitarian purposes, for the purpose of ascertaining whether the inmates are properly treated, or have been unjustly placed, or are improperly held in such institutions, with power to correct any abuses that shall be found to exist."

The Board is required to make its visits monthly, without pre-

vious notice, and to offer to the inmates opportunities for private conversation. Any communication directed to this Board must be forwarded to the Post-office by the person in charge, without inspection or delay. This Board reports annually to the Governor. The members are allowed their actual traveling and other necessary expenses.

Remarks: Your committee are of the opinion that the Connecticut law is just and equitable, protecting fully the personal rights of the insane, as well as sustaining and strengthening the rightful authority of the institutions.

Rhode Island: In the year 1869 there was established in this State a "Board of Charities and Correction," consisting of nine persons. No member of the Board except the Secretary, receives any compensation for his services, but every member is paid his necessary traveling expenses.

The oversight, management, and control of the State Farm, the State Workhouse, House of Correction, State Asylum for the incurable Insane, State Alms House, State Prison, and Providence County Jail is vested in this Board. They appoint the officers, fix their compensation, and direct all purchases for the public institutions. Your Committee are of the opinion that the powers delegated to the Rhode Island Board of Charities and Correction, are similar to those generally given to Local Boards of Trustees, or managers of similar institutions in other States.

New York: The number of insane in the various institutions of this State, Oct. 1, 1880, was 9,537. As follows:

In State Institutions,	-	-	-	-	2,663
In City Asylums,	-				4,334
In County Asylums,		-	-		1,992
In Asylums for Insane Criminals,			-		146
In Private Asylums,	-			-	402
Aggregate,		-	-		<u>9,537</u>

The establishment of the State Board of Charities by the Laws of 1867, had for its objects the State supervision and inspection of the numerous charitable, correctional, and eleemosynary institutions of the State, and the collection of statistics relating to the various dependent classes. As thus organized, the Board was composed of eight Commissioners, one from each judicial district, appointed by the Governor and Senate. By the Law of 1873, two additional Commissioners for New York, and one additional

Commissioner for King's county were appointed. The Commissioners receive no compensation for their time and services, but their actual and necessary expenses while in the discharge of their official duties are repaid by the State.

The statute confers power upon the Board to visit and inspect all charitable institutions of the State, to visit and examine the various poor-houses and alms-houses of the State, to report annually in writing to the Legislature as to the best methods of dealing with those who require assistance from the public funds, to furnish a tabulated statement as nearly as possible of the number, sex, age, and nativity of various classes requiring public charity. In the discharge of its duties the Board has instituted and carried out a number of special inquiries and examinations. Among the more important of these are a full and complete census of idiots of the State, not only in institutions, but also in family care; an extended examination into the condition of children in the alms-houses, a thorough and systematic inquiry into the cause of pauperism, and the formulation of preventive measures. It will be seen by this review that the Board possesses supervisory powers fully adequate to its purposes. In addition to the above, an Act of the Legislature passed May 12, 1874, provided for the appointment of a State Commissioner in Lunacy.

This Commissioner was nominated by the Governor and appointed by the consent of the Senate for a period of five years. His duties are to examine into and report annually the condition of the insane and idiotic in this State, and the management and conduct of the Asylums, public and private, and other institutions for their care and treatment.

He is empowered to administer oaths and to examine persons under oath, in all cases where, from evidence laid before him, there is reason to believe that any person is wrongfully deprived of his liberty, or improperly treated in any asylum, institutions, or establishments in the state, either public or private, for the care of the insane, and if the same shall be proved to his satisfaction, it shall be his duty to report the facts, together with his conclusions thereon, to a Judge of the Supreme Court, who shall thereupon grant the necessary relief.

A letter from Hon. William B. Letchworth, President of the State Board of Charities of New York, contains much useful information, as follows:

“The organization of the Board was not intended by the Leg-

islature to supersede local Boards of Trustees, or abridge their powers. Such State Boards should not lessen public confidence, but on the contrary should increase the confidence of the people in all well-conducted institutions, and being a body supposed to be impartial in its judgment and disinterested, it is in a position to protect such institutions from sensational attack and unreasonable prejudice. A State Board of Charities may be regarded as a repository for the accumulated experience and knowledge, not only of its own State, but of other States and countries, available at all times for the guidance of the public in charitable effort. It sustains to the institutions of the State an analogous relation to that of the Local Government Board of England to the charitable institutions of that country. The great reforms and beneficent changes effected throughout England by the agency of the Local Government Board, have been so striking as to demonstrate the advantages of such a central organization beyond a question. Being thoroughly convinced of the benefits resulting from the work of this Board, I am in favor of establishing State Boards in all our States.'

Dr. John B. Chapin, Sup't of the Willard Asylum for the Insane, writes :

"I was in favor of the creation of the State Board of Charities before its creation in this State. I think the results have been satisfactory, though the board may not have accomplished all that they have desired. They have been conservative and will prove of great benefit to the public and the public institutions. It is very difficult to find a body of men properly qualified who have the leisure to devote to the work."

The State of Pennsylvania has a Board of Public Charities, consisting of five commissioners. It was created by act of Legislature in 1869.

The members of the Board receive no compensation for their services, but their actual traveling and other necessary expenses are paid by the State Treasurer. The Secretary of the Board receives a fixed salary of \$3,000.00, and is required to keep a correct record of its proceedings, oversee and conduct its out-door business, and visit all charitable institutions in the State. The Commissioners have full power, either by themselves or their general agent, at all times, to look into and examine the condition of all charitable, reformatory, or correctional institutions within the State; to examine the government and management of their inmates, the

conduct of the Trustees, Directors and other officers, and all other matters pertaining to their usefulness and good management.

They are required, by section six of the law, to see whether the laws in relation to the public institutions are complied with, and whether all parts of the State are equally benefited.

They are authorized to administer oaths in examining persons relative to any matters connected with the public institutions. By subsequent legislation in 1873, two additional Commissioners were appointed, making the number of members of the Board seven. In 1874 the Board of Charities was given authority to designate three persons in any county to act as visitors to the several Alms Houses.

The Board of Charities was also required to annually prepare and print, for the use of the Legislature, a correct and complete report of all their doings during the year preceding, with such suggestions as they may deem necessary and pertinent. Since the organization of this Board, three State Hospitals for the Indigent Insane have been erected under their advice and guidance. Many of the Alms Houses have been improved, and satisfactory progress has been made in providing for the other defective classes.

Ohio was the second State to organize a Board of Charities. The law creating it was passed April 17, 1867. From 1872 to 1876 it withdrew authority and provision for such work; but the Board was again established and has, during the past five years, been active in its work of supervision. The revised law as amended April 15, 1880, provides for the appointment of six persons, "not more than three of whom shall be from the same political party, who shall constitute a State Board of Charities, to serve without pay." The Governor is ex-officio president of the Board. They are empowered to investigate the whole system of public charities and correctional institutions of the State, including the prisons, jails, hospitals, asylums, and poor-houses. They have power to establish a uniform and complete system of statistics. All plans for new jails or infirmaries before adoption must be submitted to their criticism. The Governor may, at any time, order an investigation by the Board of the management of any of the public institutions, and in making such investigations, they have power to send for persons or papers and to administer oaths. The Secretary of the Board is a salaried officer constantly on duty.

At the end of the year a full and complete report of all of their doings is prepared and printed for the use of the Legislature.

The Michigan State Board of Corrections and Charities was or-

ganized in 1871. It consists of four members and a Secretary. It was made a part of its duty to visit and thoroughly examine and in some measure to supervise the prisons, asylums, and reformatories in the State, as well as the jails and poor-houses of the several counties. It was not created for the purpose of interfering with the functions of the local boards having the immediate care of institutions committed to their charge, but it was designed through investigation and comparison to suggest more uniform, economical, and improved methods for the treatment of those who through criminality, poverty, or misfortune have become a public charge. In this connection we quote from an interesting letter from Henry W. Lord, the Secretary of the Board. Speaking of the objects and aims of the board he says: "It visits and reports to the Governor and legislature. It diffuses a large amount of information on penal, pauper, and charitable topics, by which the people are educated up to the intelligent discharge of their duties. All the state institutions are visited, and all the jails and poor-houses, and the desire on the part of all of them to deserve and attain the approbation of the board tends to good care and discipline.

None of the commissioners are paid.

They appoint a secretary, who alone has a fixed salary and his traveling expenses. The state appropriates \$5,000 per annum for the expense of the board, but it has never used as much as \$4,000 in any one year. I think the existence of such a board has a decided tendency to preserve confidence in the state asylums, and serves as a barrier against sensational stories always liable to obtain circulation respecting the very best of such institutions. Our board has always been non-partizan and has enjoyed the confidence of the people of our state. The governor and legislature have depended much upon it for information and suggestions as to new institutions, deemed necessary, their organization, management, etc."

Dr. George C. Palmer, Superintendent of the Michigan Asylum for the Insane at Kalamazoo, writes: "When you consider the character of the men that compose the Board, the character of the work done, and the comprehensive views taken in regard to further provision for the insane, we do not hesitate to say that it is an important organization and is doing good work in this State."

Dr. Henry M. Hurd, Supt. of the Eastern Michigan Asylum at Pontiac, writes: "This Board has been in existence ten years, and during that time has brought about material improvements in the

county houses and jails of the State, and has exercised a beneficial influence over all institutions of the State."

The Wisconsin State Board of Charities and Reform has been in active existence since 1871. It consists of five members. The law organizing the Board made it their duties to investigate and supervise the whole system of the charitable and correctional institutions supported by the state or receiving aid from the state treasury, by personal visits to each, making themselves familiar with all matters necessary to be understood in judging of their usefulness or the economy of their management. It is their duty to recommend such changes and additional improvements as they may deem necessary for their greater economy and efficiency. In carrying out the provisions of the law, they have devoted attention to the improvements of the alms-houses and jails, and the removal of insane persons from the former to the state hospitals. They have procured the passage of an act rendering it unlawful to keep healthy and well-formed children over five years of age in the poor-houses. New buildings for the same have been erected in several counties by the advice and counsel of the Board.

The general condition of the jails has been notably improved, radical defects in the management of the state prisons have been corrected, a plan for keeping the books and accounts of the state charitable institutions, after a uniform system, has been adopted, so that each could be compared with the other in the economy of its management. In addition to the above the board has made five special investigations in the management of the public institutions. Twice into that of the institutions for the deaf and dumb, once each into that of the state prisons and the Racine county poor-house and the house of correction of Milwaukee county. In its watchful supervision of public and private institutions it has reformed abuses and corrected evils that have never become matters of public scandal or notoriety; where wrongs could be righted quietly it has been done without giving the matters publicity. The members have given their personal time without pay except when investigations were ordered by the governor. Notwithstanding this fact they have either personally or through their secretary, or both, visited every county jail and poor-house at least once each year, written and sent out hundreds of letters each year, established a valuable library pertaining to the department of labor in which they are engaged, and have prepared, in accordance with the law, ten reports containing a very large amount of valuable information.

In 1869 the Legislature of Illinois established the Board of State Commissioners of Public Charities. It consists of five members, appointed by the Governor with the consent of the Senate. Said Commissioners receive no compensation for their time or services, but the actual expenses of each one while engaged in the performance of the duties of their office is paid quarterly by the State Treasurer. The Secretary, elected from their number, receives a salary of \$3,000 per annum. "The Board of State Commissioners have full power at all times to look into and examine the condition, financially and otherwise, of the several institutions which they are authorized by this act to visit; to enquire and examine into the government and management of their inmates, the official conduct of trustees, officers, and employees of the same, the condition of the buildings, grounds, and other property connected therewith, and into all other matters pertaining to their usefulness and good management, and for these purposes they shall have free access to the grounds, buildings, and all books and papers relating to State institutions, and all persons now or hereafter connected with the same are hereby directed and required to give such information and afford such facilities for inspection as the State Commissioners may require." They are also required to visit, at least once in each year, the City or County Alms or Poor Houses and other places where the poor or insane may be confined. It is their duty to visit all institutions receiving State aid, and ascertain whether the moneys which are appropriated are economically and judiciously expended, and to report in writing to the Governor by the 15th of December, annually, the result of their investigations, together with such other information and recommendations as they may deem proper.

Dr. H. M. Carriel, Superintendent of the Illinois Central Hospital for Insane at Jacksonville, writes: "Among the advantages of such a Board are the facts they collect and present in a reliable form to the Legislature as to the wants of the State, the number and condition of the dependent classes, particularly the insane in the Alms Houses or anywhere else out of the State institutions. It is desirable in a large State like Illinois to have some authorized body to do this work. Our Board of Charities has always been so fair and just that I think it has done the institutions good service. I always feel, in case any unjust charges are brought against us, the verdict of our Board of Charities would have great weight with the public, and that verdict would be just. I am of

the opinion that a Commissioner or a Board of Commissioners would prove serviceable to the public of most of the States, providing the right men can be found for the office.

“Such functionaries should in all cases have had practical experience and knowledge as to the treatment and management of the insane. During its entire existence the Illinois Board of Charities has had the valuable services of Rev. F. E. Wines as Secretary of the Board, who by intelligent interest in the work, comprehensive knowledge of the subject, and conscientious devotion to his duties, has done good service to the State and the institutions.”

In regard to Iowa, we quote from a letter received from Dr. Mark Ranney, Superintendent of the Iowa Hospital for the Insane at Mount Pleasant: “There is no Board of Charities in this State, but we have what is called a Visiting Committee to the Hospitals for the Insane, appointed by the Governor, and holding office during their own pleasure or good behavior. This Committee consists of three persons, one of whom is a woman. It was created some nine years ago by the labors of the notorious Mrs. Packard. The act creating the Committee gave them extraordinary powers. The power to run through the institutions unattended, to discharge employees, to set on foot proceedings that might result in imprisonment of the officers, etc. Their names are to be kept conspicuously posted up in every ward. At first the Committee gave me a good deal of trouble and sorely interfered with the successful working of the Hospital. . . .

“The Committee is now composed of some intelligent, well-disposed persons, whom it is a pleasure to see, but they can do no good that the Board of Trustees cannot do just as well.”

Minnesota has a Board of three Physicians called State Commissioners, with authority to examine the State Hospitals once in six months, and if they find cases unsuitable for treatment to report them to the Governor. They also report concerning the sanitary conditions of the institutions. They are only paid necessary traveling expenses.

Kansas: In this State the charitable institutions, comprising two Asylums for the Insane, one School for Blind and Deaf and Dumb, one Reform School, and one institution for Feeble-Minded, are under the control of one Board of Trustees, who are appointed by the Governor and confirmed by the Senate. The duties and power of this Board comprise the entire government of the insti-

tutions. They are paid three dollars per day, for time actually spent in the discharge of their duties. Dr. B. D. Eastman, Superintendent of the Asylum for the Insane at Topeka, says: "This scheme has much in it to commend. I am not prepared to say it is the best, but it has many advantages. There is a uniformity of management and economy in purchases. There comes from this method a conservatism in the action of the Board, as they are free from local prejudices which sometimes exist in local Boards. This Board of Trustees or Commissioners does not have anything to do with insanity outside of the institutions."

In regard to the British Provinces, your committee find that the system pursued in Great Britain is modified in the Provinces to meet the changed political condition. Hon. J. W. Langmuir, the able inspector of asylums, prisons, and public charities for the Province of Ontario, writes :

"This office was created in 1858 by the government of Old Canada, at which time a Board of Inspectors was appointed, comprising four members and a Secretary ; but on the confederation of the Provinces each Province was charged with the care of its own public institutions. The Province of Ontario repealed the old laws and passed a statute for the appointment of a single inspector of her public institutions. The duties under the statute are very clearly set forth in my report, from which I quote: 'These comprise the statutory inspection three times a year of the asylums for the insane, of the institutions for the deaf, the dumb, and the blind and the prisons and reformatories belonging to the Provinces ; twice a year of all the county gaols and once a year of all hospitals and charities aided by the government.'

"Besides the general authorizing and control of the maintenance routine of the institutions, he has to frame the by-laws and regulations governing their discipline, management, and general economy.

"He is further required by statute as a commissioner to investigate upon oath into all irregularities which may occur in the administration of the affairs of institutions. He has to make inquiries into the cases of all lunatics committed to the county gaols, and to arrange for their removal to the various asylums.

"He also has charge of the estates of lunatics committed to the asylums, who have no committee or guardian appointed by the Court of Chancery. It is hardly necessary to point out that such extensive powers, the chief of which have just been detailed, would not be conferred upon any official without a direct check and par-

tial control being exercised over him by the Government conferring the authority, and this is very simply but most effectively furnished. One of the members of the Ontario Government is the Executive Head of the Inspector's Department, and with him the inspector is in constant communication, consulting with and advising him respecting all matters pertaining to the institutions service."

Great Britain : In the year 1845, Lord Ashley succeeded in passing his famous "Lunacy Act," which has had so much influence in subsequent years in ameliorating the condition of the insane of England and Scotland. One of the most important provisions of this act was the organization of the Commissioners in Lunacy in England. Six gentlemen are appointed to act as Visiting Commissioners in Lunacy. Of this number three are medical men and three are barristers. The salary of each Commissioner is \$7,500.00 per annum, and each is prohibited from holding any other office or practicing in his profession. There are in addition six unpaid non-visiting commissioners. In Scotland the Board of Commissioners consists of five members.

As the duties of each Board are similar, I will describe them together. It is their duty to grant licenses, to visit and regulate asylums, to report to the Lord Chancellor as to the condition of the same and the conduct and management of certified lunatics in England, Scotland and Wales. A report once a year is issued, in which a vast amount of carefully prepared statistics and useful information relating to lunatics is published. The commissioners visit all licensed houses within their immediate jurisdiction six times a year. Four of these visits are made conjointly by a medical and legal commissioner, and two single visits are made by a legal commissioner. They have power to visit all work-houses or gaols in which any lunatic is confined. No lunatic, if certified to be dangerous, can be removed from any house or hospital without first obtaining the consent of the commissioners and visitors. The commissioners have power to discharge any patient confined in any asylum or licensed house if, after two visits, they consider him to have been improperly detained. No one deriving profit from the care or charge of persons of unsound mind can receive any patient into his house without having first been licensed by the commissioners. In making their visits to hospitals and asylums, inquiries are made as follows : Firstly. Number of patients then in the house. Secondly. Number of patients admitted since their last visit. Thirdly. Number of patients discharged or died since

their last visit. Fourthly. Particulars relating to the carriage drives and walks of the patients. Fifthly. Number of patients attending divine worship. Sixthly. Particulars relating to the occupations and amusements of the patients. Seventhly. Number of patients then under medical treatment. Eighthly. Particulars relating to restraint and seclusion made since last visit. Ninthly. Particulars relating to visitation of the patients by their friends.

Two or more of the commissioners may also visit any licensed house or hospital at any hour of the night as they think proper. We have dwelt at considerable length on the organization and powers of these various commissioners, in order that you might have before you for consideration what may be termed the old and the new methods of public supervision of hospitals for the insane.

You observe that it has become customary for many States to have Boards of Charities. The value of these depends entirely on the character of the members appointed.

Short visits at long intervals of officials who are practically unfamiliar with the great trusts confided to them can do little good.

Commissioners who start out with the impression that they have to deal with dishonesty will be likely to do injustice to faithful officials, and accomplish little good to the afflicted. * "The services of all these commissioners are valuable exactly in proportion to the integrity of their members, and the wisdom with which they perform their duties." When rightly selected, their inspections and reports will tend to support and maintain confidence in the public institutions. Your committee is decidedly of the opinion that Boards of Charities cannot supersede or take the place of local Boards of Trustees or directors. To secure good management and enlightened treatment, the regular visitation at short intervals of a committee from a permanently constituted, non-partisan Board of Trustees, serving without compensation, and having no motive in giving their time and attention but a desire to promote the best interests of the afflicted, is more likely to be thorough and useful and the best guarantee to the public against wrong and injustice. We do not believe that any system of supervision can entirely banish the unfounded prejudices, which still have a prevalence, quite inconsistent with an enlightened knowledge of the subject. There are many evidences of misunderstanding on nearly every point connected with insanity. These prejudices and misunderstandings are largely the outgrowth of ignorance respecting the

* Thomas S. Kirkbride, M.D.

real nature of insanity. Insanity is the manifestation of diseased conditions. In some the derangement is so slight as to be amenable to treatment at home. Generally, however, other symptoms complicate the case and render necessary its removal from previous influences. Unreasonable and unfounded dislike of friends; manifestations of violence toward self and others; continual excitement beyond reasonable limits, necessitate placing the subject under control more or less permanent. In other words, it becomes necessary to deprive him of free will power; and this, too, without his being able to appreciate the necessity. To the insane man his delusions are more real than real facts and events are to the sane. Hence he looks upon all restraint, whether exercised by friends or officials, as not only unnecessary, but barbarous and cruelly unjust. These are but a few of the obvious complicating factors which render this problem so difficult of solution. One fact is generally admitted: * "When a man loses his reason, it becomes necessary that the reason of others, in a greater or less extent, shall supply its place. To that extent the movements of the person thus affected are subject to the control of others, and his property is taken from his management and disposal. Humanity demands this, the peace and safety of society demand it, and the ultimate good of all parties is promoted by it." Hence that system of supervision which humanely provides skilled medical attendance for the insane, while carefully guarding their personal rights, will in the end receive the approval of conservative humanitarians.

Your committee unhesitatingly approves the plan already pursued in this and thirteen other states, of having a non-partisan, disinterested Board of Commissioners, which standing between the institutions and the state with ample powers to investigate and report, furnishes to the public an additional promise of fidelity, and to the charitable institutions a respite from unjust suspicions. The importance of this supervision is measurably increased in the larger states where it is desirable to have uniformity of action in the distribution of state aid. Two of your committee have personally examined the practical workings of the system in England and Scotland, and have heard the opinions of professional men who were best qualified to form a correct judgment as to the value of its labors. We believe that the English plan is an excellent one.

The Board of Commissioners is composed of men well known

*Isaac Ray, M.D.

for professional attainments and special knowledge of psychology. They are appointed by the Crown for an indefinite period of time. They each receive \$7,500.00 per annum, and their time is devoted exclusively to the duties of their office. They are selected on the ground of special attainments in the department of psychology. While their powers are chiefly advisory, yet they exercise, through their publications, a wide influence; and their recommendations have become equal to actual legal enactments, in reference to all important questions connected with the management of the insane.

But is the English and Scotch system applicable to this country under its present form of government? We believe not.

For the following reasons:

1st. There is no central power to appoint such a commission with authority to regulate the internal economies of the several states. Herein this country differs widely from either England or Scotland, which are under one authority.

2d. The vast extent of country, and the sparseness of population in the larger portion, practically excludes the formation of a governmental commission. When it is remembered that the entire territory covered by the authority of the English board is less than any one of twenty-one states and territories of the Union, the objection becomes more apparent.

3d. The spirit and theory of our political institutions is directly opposed to any such governmental interference as that implied in the adoption of the English system. Here each state takes pride in maintaining its control of all internal affairs. Such will continue to be the case so long as boundary lines separate the territories, and political parties elect the governmental officers of each individual state.

These objections do not hold when considering this subject in its relation to individual state governments. On the contrary, there are many valid arguments in favor of the formation of such commissions; and your committee would, in conclusion, heartily commend the organization of a Supervising Board for each state—representing in its official body the characteristics and powers of the English Commissioners in Lunacy; said Board to consist of at least five members, non-partizan in spirit and eminent in psychological or humanitarian work. The name we deem of little importance. It may be a "Commission in Lunacy," "Inspectors of Charities," or a "Board of State Charities." So long as the duties and powers assigned, and the character of the members are like

those of the Commissioners of Lunacy in England or Scotland, the project will receive our cordial approval.

A. M. SHEW, M.D., }
H. P. STEARNS, M.D., } *Committee.*

REPORT ON LUNACY COMMISSIONS.

D. A. CLEVELAND, M.D., MIDDLETOWN.

Mr. President and Gentlemen: At the meeting of the State Medical Society in 1879, the following resolutions were introduced by Dr. Nickerson of Meriden, with reference to that portion of the President's address that related to the treatment of insanity:

Resolved, That it is the sense of this Convention that the government of this State should appoint three persons, two of whom, at least, shall be physicians of experience and ability, to act as Commissioners in Lunacy, who shall have the supervision of all the insane in this State, whether in hospital, private institutions, alms houses, their homes, or otherwise. It shall be the duty of this Commission to investigate the whole subject of insanity in all its bearings, relations, and causes,—to examine into and report annually to the Governor and legislature of this State the condition and management of all the insane in this State, together with such recommendations as they shall think advisable as to the future management of the insane, instructing and enlightening the public as to the causes of insanity and proper means for its prevention; and especially to inquire if the interests of science and the welfare of insane patients would not be promoted by hospitals for the insane being organized on the same principles as other hospitals. * * *

Resolved, That a committee be appointed by this Convention to memorialize the coming legislature for the purpose of procuring an act embodying the substance of these resolutions.

On motion of Dr. Chamberlain, the last resolution was stricken out, and the following substituted:

Resolved, That a committee of five be appointed on behalf of the Society to investigate the subjects embraced in these resolutions, and report at the next Convention at New Haven what action, if any, be advisable.

Dr. M. C. White, New Haven,
Dr. N. Nickerson, Meriden,
Dr. G. W. Russell, Hartford,
Dr. C. W. Chamberlain, Hartford,
Dr. C. A. Lindsley, New Haven,

were appointed as members of this committee.

At the meeting of the Society in New Haven in 1880, the committee reported as follows:

WHEREAS, We consider that our information upon the questions involved in the resolutions referred to us is not sufficiently extensive to enable us to recommend decided action at present, we submit the following resolution:

Resolved, That a committee of three, conversant with the history of insanity, should be appointed by the State Convention, to investigate the subject of Lunacy Commissions in the other states, as well as in foreign countries, their history, aims, and results, for the information of the next Annual Convention.

The President appointed as members of this committee Dr. A. M. Shew, Dr. H. P. Stearns, and myself.

From the date of my appointment, all through the past year, I was expecting notice from the chairman of the committee, informing me of the time and place, when and where the committee should be organized, and a conference held in regard to the general nature of the report, and some details respecting it be determined upon.

The year passed by, and it was not until the 21st inst., four days ago, that any conference upon the subject was offered or suggested by my associates, both of whom take precedence of me in the order of appointment. On the day named I met the committee and listened to the report which had been prepared by the chairman of the committee, and which has been presented here to-day.

For the following reasons I declined signing the report:

First. That, in consideration of the importance of the subject involved, there was not sufficient time given me in which to discuss the report in all its bearings and relations, and in which I might, if I so desired, suggest alterations and amendments, and prepare the text for the same, which should be offered to my associates for their consideration.

Second. While as a historical paper well and carefully written, embracing many facts of interest in relation to Boards of State Charities, it does not deal largely with the subject embraced in the resolution under which we were appointed, which I understand to be the history, aims, and results of Lunacy Commissions distinctively as such, and separate from any other organization.

Third. The third topic embraced in the resolution is not treated as fully or elaborated as extensively as the importance of the

subject demands, or the prominence given to it by the Lunacy Commissioners of Great Britain would warrant.

Fourth. I object to the general tone of that part of their report which bears upon the advisability of the adoption of the resolutions of 1879, as being inimical thereto, and contrary to my convictions in relation to a portion of those resolutions, at least, and I also hold the opinion that the proper time to discuss the points presented in those resolutions will be when the same shall be brought up again for consideration.

For the foregoing reasons I respectfully declined endorsing the report, and gave notice to my associates that I should make a minority report, which I now respectfully present.

I approach this subject with a vivid consciousness of its vast importance, for according as gentlemen understand the history, give credit to the purity of the aims, and appreciate the noble results of lunacy commissions, so will they act on the resolutions offered, and affect in a large measure the weal or woe of about 1,400 persons of unsound mind in our own little State, nearly all of whom are helpless and dependent, and many of whom are unprotected, and in regard to a majority of whom little is known outside of the asylums where they are confined, and that little is gathered from meager yearly reports of superintendents, averaging perhaps 40 pages each.

My impressions of the importance of this subject are deepened when I take into account the vast number of persons of this class scattered over our country, counting up at the present time quite or nearly 75,000, in regard to whom all that is known is gathered from the meager reports to which I have referred, or the reports of lunacy commissions, many of whom are appointed largely in the interests of superintendents, or directly influenced by them. But it is cheering to note the fact that the time has fully come when philanthropic men and women all over the civilized world are anxiously inquiring after the welfare and needs of this numerous and terribly unfortunate class, and measures are proposed by which their sad condition shall be ameliorated. And, as has been the case with every other great reform, there has been on the part of those interested in perpetuating the systems of the past, a dogged resistance to anything which has savored of innovation upon the customs and claimed privileges of those who have held an almost autocratic control of the lives and happiness of the insane. The

undue sensitiveness of superintendents and Boards of Trustees to the critical inquiry and investigation into the inward workings of asylums for the insane has aroused suspicion in the public mind as to what is the actual condition of the insane in confinement, and how they are treated, and the frequent revolting reports of abuse of them by those in power, many of the reports, no doubt, without foundation, but many, it is to be feared, and some of which I know to be, true in detail, have had the effect to awaken the people to make further inquiries; and as one result of this condition, and largely as a consequence of it, attempts have been made to organize lunacy commissions, whose duty it should be to acquaint themselves fully with all the details of the care and management of the insane, and report the same for the information of the people at large.

In reference to lunacy commissions in this country but little can be said. As long ago as 1870, Dr. E. T. Wilkins was appointed under an act of the Legislature of California, to visit the principal asylums of the United States and Europe, and collect and compile all accessible information as to their management, structural arrangements, the different modes of treatment, and the statistics of insanity; especial attention being called to the asylums of Great Britain, Ireland, France, and Germany. Dr. Wilkins was appointed for only one year. The aim of the commission I have already given. Its results, so far as can be gathered from a careful study of his report, which comprised a pamphlet of about 350 pages, were valuable as statistics, and as hints in relation to the thoroughness of lunacy supervision in those foreign countries named, and setting forth the advanced views of the then more modern minds in regard to the value of supervision other than that of superintendents, which is shown in their advice as to the proper construction of asylums, and occupation of patients, and many details affecting their care and comfort, and means employed for their cure. In 1864 Massachusetts organized a Board of State Charities which had supervision of four departments of public interest, viz: The State Alms-houses, the State Prisons, the State Reformatories and County Prisons, and lunatic hospitals. In 1873 a commission of lunacy, consisting of Dr. Nathan Allen, of Lowell, and Wendell Phillips, of Boston, was appointed, which served for one year. Their labors were directed to a careful investigation of the condition of the lunatics and lunatic asylums of that State, as well as an investigation of the workings of lunacy commissions in other New England States,

where such commissions were organized ; and it is interesting to read the reports of Dr. Allen, given in his terse, straight-forward, honest style; and I may be pardoned for quoting from one of Dr. Allen's writings on this subject, as showing the efficacy of such a commission, where organized, and the opinion of fair-minded gentlemen as to its results.

“In no other institution or corporation in the country are individuals charged with duties and responsibilities of such magnitude as the officers of lunatic hospitals, and nowhere else are counsel, skill, and wisdom of the highest order so much needed as here. The lunatic hospitals of Great Britain are provided with these advantages in a Commission of Lunacy. Superintendents, trustees, and commissioners, all work harmoniously together for the best interests of the insane. The Lunacy Commission has been in operation in England over thirty years, and that in Scotland over twenty years. It is admitted on all sides that the most beneficial results have been brought about by the agency of these commissions in the improved management of hospitals and the better treatment of the insane.”

In the same year that Dr. Allen was appointed on the Lunacy Commission of Massachusetts, we find from the report of the Board of State Charities, made in advance of that of the lunacy commission, that the report on the condition of the insane was made up to some extent by the superintendents and trustees of the lunatic hospitals (See 11th report Mass. Board of State Charities, p. 147,) and embodied in the reports of the Board. The aim of the Lunacy Commission of Massachusetts was to afford a protection and care of all the insane persons in the State, in and out of asylums. It was not, so far as I have been able to learn, the intention to interfere with the rights and privileges of superintendents, or Boards of Trustees; and so far as the relations of a commission were concerned, or had any bearing upon the insane, it simply was acting as the guardian of their rights and persons, and also as a connecting link between the mysterious inside of an asylum and the suspicious outside world.

For the results of the labors of a lunacy commission in Massachusetts little can be said. Appointed in spite of the earnest protest of those wedded to the old methods, with a brief term of service in which to labor, with the prejudices of almost every officer and superintendent of the State Asylums working to oppose them, with but little sympathy from the medical fraternity of the

State, who generally, either from ignorance of the subject, or apathy towards it, treated it with indifference, they made their report at the expiration of their term of service, and yielded the insane once more into the hands of those who had previously had control of them; being forced to content themselves with the consciousness of having sown the good seed, which, in the rich soil of philanthropic Massachusetts, could not fail, in time, of bringing forth a bountiful harvest of good things for her insane population.

As far back as 1845, the Legislature of Vermont, with an insane population of less than 500, established a permanent commission of insanity, whose duty it was to visit the asylum monthly, or oftener, with the trustees, or alone, to examine into the condition of the institution, the management of the patients, and the general welfare of the asylum, and to make a report thereon annually to the legislature. I cannot describe the aims and results of this commission better than by quoting the remarks of Dr. Draper, superintendent of the Brattleboro Asylum, in reference to it. He says: "The Commissioner thus occupied the position of guardian to the insane wards of the State, and visiting agent of the public. I think the office has been useful and is eminently a proper one. In 1878 the commission was changed in name and the number increased to three. If, in addition to the duties required in relation to the insane in this institution, it was made obligatory upon him to visit all the insane in the State, in the town Almshouses, and report upon their condition, the public interests would be better served." In this closing paragraph he alludes to a point of great interest to all humane minds. There are, no doubt, at the present time town almshouses where, in squalor and filth, neglected and unkempt, chained in dirty dungeons, it may be, are men and women, made in the image of God, bereft of reason and abandoned to the tender mercies of the mercenary men who have bid them off to provide for them at the lowest figure; and this in New England; in Connecticut, a State where large charities have been extended to all the poor and unfortunate within her borders.

Then we have evidence that there are many insane persons confined in wretched quarters outside of the Almshouses, kept in secret by those who should care tenderly for them, abused and tortured, about whom nothing is definitely known, either by the town authorities or the community at large. We rightfully infer that this is so from the occasional cropping out of a case such as I referred to in a public address a few years since: a lunatic

was brought to my door who had escaped from his brother in Meriden, with a heavy log chain locked around his neck. He was in his rags and filth a loathsome object. He had escaped from the barn-chamber where he was chained at night, after a hard day's work on his brother's farm. The authorities of the town of Meriden disclaimed any knowledge of such a person. During the past winter a poor distressed lunatic was found in some place contiguous to Bridgeport, whose condition or existence were unknown to the community until an accident brought her to notice.

Doubtless you have all read in the last report of the superintendent of the Hartford Retreat of the case of the woman brought to the Retreat with cords tightly drawn around her ankles and wrists, resulting in mortification and death.

While writing the first few pages of this report, I was called to examine a female confined in our county jail for alleged drunkenness. I found her insane, and on inquiry found that she had been so for weeks, and that with homicidal tendencies. The mere accident of her escaping from her home and being found acting strangely on the streets of our city, was the cause of her arrest. I sent her to the hospital for the insane where she ought to have been sent weeks ago, instead of being allowed to run at large, endangering the lives of her children and lessening her chances of cure by improper treatment or no treatment at all.

One of the aims of a Lunacy commission is to look up and care for just such cases as these.

The nearest approach we have ever had to a Lunacy Commission in this State, was the appointment of a kind of humane commission, whose duties were so various that none of them were properly attended to. These duties were to visit the jails, reformatory institutions, and lunatic hospitals of the state. This commission was appointed in 1873, under a pressure brought to bear upon the legislature by one Mrs. Packard. By reason of their inefficiency or expiration of the term for which they were appointed, others were appointed to fill their places in 1880,

This allusion to the Lunacy Commissions of this country must suffice. It is to be regretted that a more favorable report cannot be given in relation to them. They have thus far made but little progress against the sentiment of the following declaration made years ago by the American Association of Superintendents: "The appointment of Lunacy Commissioners, with a view to official visits or any supervision of state institutions for the insane, is to

be deprecated as not only wholly unnecessary, but subversive of the present efficient system of control by trustees appointed by the state executive."

Let us now briefly review the subject of Lunacy Commissions in Great Britain, and as touching upon the points embraced in the resolution calling for this report, I will quote the remarks of Dr. Merrick Bemus, late Superintendent of the Worcester Asylum, made some years since in relation to them. He says: "The improvements are many. They have supplemented and modified their system to such an extent, that, while it bears some resemblance to the past, the present is studded all over with new features. The improvements for ventilation, cleanliness, classification, for freedom, both outside and inside, are most noteworthy. Their advances, in the direction of labor among patients, in the immunity from physical restraint and seclusion, in the granting innocent indulgence to trustworthy patients, are far beyond what is now practiced in any American hospital. The Lunatic commission has done much, and its continued operation is of incalculable benefit, not only to the insane, but also to the officers of the institutions." . . . "From their frequent inspection of the several institutions, and from the mass of facts gathered by their correspondence, they publish every year a valuable report of their labors, with plans, suggestions, and histories of cases of hardship, abuse, and suffering."

One cannot fail, in perusing the reports of the Commissioners for Great Britain, to note the thoroughness which characterizes their labors. Nothing, however trivial, which has the least bearing upon the welfare, safety, comfort, or happiness of the insane is overlooked. In regard to the main features of the work of the Commissioners for England, Ireland, and Scotland, there is little difference between them to note. They are each, as far as points of usefulness and efficiency, far ahead of anything that has been attempted in this country. Appointed under an Act of Parliament, with large prerogatives, and only amenable to the power under whose commission they act. Independent of, but in all cases when possible, working in harmony with the officers of the several institutions having the care of the insane. Devoted, enthusiastic, pains taking and methodical, they are the advisers, regulators, and efficient coadjutors of all honest and faithful officers of the institutions, and labor in unison with them. And by their fair, unprejudiced reports, voluminous and minute in detail, spreading before

the people the exact condition of their insane friends, enumerating without fear or favor every case of abuse of patients coming to their knowledge. They inspire confidence in the minds of the people, and obviate that suspicion which has so largely obtained in regard to Insane Asylums of that country at a former period, and which so largely obtains in regard to the asylums of this country at the present time, and are a means of open and unobstructed communication between the outside world and the asylums.

Nor are their labors confined to the asylums alone. They have the supervision of every lunatic in the realm, whether in public or private asylums, boarded out patients, in private houses or elsewhere; the condition of all is carefully looked into, and any necessary measures for their comfort, safety, and cure advised, and by their efforts provided for them.

I shall for want of time in which to speak of the labors of each commission of Great Britain, in detail, confine myself to that of Scotland, towards which the eyes of all persons interested in the welfare of the insane are directed at the present time.

In the reports of the commissioners for 1880, the first feature of interest presenting itself to the mind is the systematic notation of each circumstance connected with asylum management. And I will briefly refer to them as they present themselves to my mind. First, number of deaths and causes of the same. This includes suicides and homicides. And it is shown that careful and patient inquiry is made into all the circumstances attending the death of a patient where the same is at all open to suspicion. To use the exact words of the Commissioners: "In every case of death by accident, of a sudden or unexpected death, or death under apparent or alleged suspicions occurring in an asylum, the Superintendent gives intimation to the Procurator Fiscal of the county in which the asylum is situated, who makes such inquiry as he may deem necessary." The results of such inquiry are made known to the community through the reports of the commissioner who gives them in detail. *Vide*, Twenty-second Report Lunacy Commissioners for Scotland, page xxx.

Again, the Commissioners are required to have supervision of all the pauper insane in private dwellings. And it is required that the residence of the pauper insane shall be reported to, and their names registered by the Commissioner.

There *are* circumstances under which private patients other than paupers are amenable to the care and supervision of the Commissioners. *Ibid.*, p. L.

Another important work manifestly due largely to the efforts of the commission, as is shown by the remarks of Dr. Bemus already alluded to, is the increase in the numbers of those profitably employed. Great prominence is given to the subject of employment as a means of promoting the happiness of the patients and assisting largely in their cure. According to their last report 61 per cent. of all the lunatics or persons of unsound mind confined in the hospitals were employed in some useful and profitable labor. The details of the report give the number employed, as farm laborers, those assisting in the wards, those at trades, in the laundry, at needle work, etc. It is evident from the thoroughness with which this subject is treated by the Commissioners that they look upon occupation as one of the most effectual means of quelling undue excitement, rendering the patients contented and happy, and aiding largely in their cure, where cure is possible. They do not content themselves with simply giving the patients exercise without a motive on the part of the patient, but they engage them in labors in which they can become interested, occupying them about those things which shall call into play the remnant of those shattered mental faculties, a remnant which nearly all insane people retain in some degree, thereby breaking up the morbid circle of thought which is so prone to revolve in ceaseless course around the unfortunate victim's self as a center. Let me now call attention to the excellency of the system of supervision as practiced in Great Britain in relation to the proper place and time for treatment of the acutely insane. In order that the full advantages of such supervision may be apparent, I will repeat what has so often been declared by intelligent superintendents, viz.: that insane patients stand a far greater chance of cure when treatment is resorted to at an early day, and consequently unless the patient can receive judicious care and appropriate treatment at home, an early commitment to an asylum is of importance. I will quote from the Thirty-fourth Report of Commissioners in Lunacy for England, p. 116, as bearing directly upon this point: "It should be borne in mind that chronic harmless lunatics or imbeciles, are the only cases that ought to be retained in a workhouse, and our efforts are always strongly directed against the reception and detention of acute cases. We have found it necessary to order the removal of decidedly insane patients, who *ought*, in the first instance, to have had the benefit of asylum treatment; and in some of the larger workhouses we frequently meet with inmates

suffering from long standing melancholia, when the history of the case gives the impression that early treatment might have resulted in cure.

“The act of Parliament has clearly defined the duties of both medical officers and parish officials, and it is to be regretted that false ideas of economy, or other reasons, should be allowed to have weight, and a course be pursued which cannot fail of being prejudicial to the patient, and, ultimately, of increasing the number of the incurable insane dependent on the rates.” In this country, or in this state at least, if there are those who may have authority to determine how the patient shall be cared for, or where he shall be placed, they are not instructed in relation to the matter, and treatment is postponed too long, and the patient remains without proper treatment until the favorable time for cure slips by, and he gravitates into a state of chronic lunacy to swell the already large list of chronic incurables. But under the watchful care of an organized Board of Lunacy Commission, who are informed upon these points of vital interest, both to the insane and those who are taxed for their support, their early removal to an asylum is insisted upon and enforced.

In the beginning of my remarks upon the Lunacy Commission of Great Britain, I referred to the fact that they enter into all the minute details that bear upon the condition of the insane. Even the character of the food served, the way in which it is served, whether relished by the patients, and when it did not suit their tastes a change was advised. The kind and condition of the bedding of the patients is noted, even to the number of blankets or spreads on each bed, and if found to be poor or inadequate, a change for the better was recommended. All these matters are reported upon in full.

Again, the subject of seclusion and restraint of patients is noted and enlarged upon. Let me quote: In speaking of the Royal Asylum of Edinburgh at Morningside they say: “The rigid separation of different parts of the buildings by means of locked doors has especially much diminished, and the confinement of excited patients within high-walled airing courts is no longer practiced.”

“It has been found that the restrictions which have been removed were not only unnecessary for the treatment of most forms of mental excitement, but their disuse has been followed by a remarkable diminution of such excitement. As a necessary complement to the removal of restrictions, there has been the development of a more complete industrial system, and

this has doubtless exercised an important influence in improving the mental condition of the patients."

Of Elgin District Asylum they report that: "Neither seclusion or restraint is used in the treatment of the patients."

Argyle and Bute Asylum, with 316 patients: "There was no patient found in seclusion or wearing any special contrivance of dress." Fife and Cross Asylum, the report says "the commissioner entered and traversed the Asylum almost from end to end without summoning a servant or requiring any door to be unlocked. This feature of the management, therefore, continues to be as fully in force as it ever was, and the results are still described as very satisfactory. Only three wards, two on the female side, and one on the male side, are locked. All the occupants of the other wards are free from restraint, even in appearance, to an extent which is very unusual. Perhaps the quietude and contentment resulting from this mode of management have done much to make it possible to carry on the asylum so long and so successfully with a population greatly exceeding that which it is fitted to hold."

I will close my report upon the aims and results of the Lunacy Commission of Great Britain by a brief reference to the efforts directed to the individualization of insane patients. This, from the remarks of Drs. Lawson and Fraser, is of paramount importance in effecting a cure of the insane, or an amelioration of their condition. While a citizen is engaged in his usual avocations, walking our streets, associating with his fellow men, enjoying his family relations, is one of the community of sane men, we, whenever his image or person is brought to our minds, individualize him at once. He has a distinctive name, a distinctive personality, a sharply cut identity, separating him from every other citizen. Let that man be bereft of his reason, if a prominent man, the first effect is to shock the community.

Inquiries are numerous; the people are anxious for his recovery. Remove him to an asylum; the sympathy of the community may follow him there, but it generally turns back from the door. He enters, is absorbed into the great mass of insane population; his personality, his identity are largely diminished, if not altogether lost; like the rain-drop that comes down from the cloud and falls upon the ocean's surface and is lost in the great mass of water, so is he lost to the community, and too often lost to himself. While sane, he lived to enjoy his labors, his business, the sympathy of friends and acquaintances. He took pleasure in social intercourse, and

his lot was as happy as that of the average man. Now this is all changed. He has entered upon a new life. He has become one of a great mass of insane population. He no longer says to one "Go," and he goeth, and to another "Come," and he cometh, but he is under subjection to others, and they, many of them, perhaps, his inferiors in all points save mental condition. To retrieve the individuality of such has been one great aim of the Scotch lunacy commission, this desideratum, according to their report, being best obtained under the system of boarding out. Whether the system of boarding out the harmless insane and imbecile could be practically employed in this country, it is not relevant to this report for me to discuss, but as a result of this system, as practised quite largely in Scotland at the present time, and its bearing upon the topic I am now considering, I will quote a few paragraphs from the report of the deputy commissioners. Speaking of the warm affection so peculiar to the Scotch people, and the warm attachment which so naturally grows up between the mentally deranged and those having the care of them, and the effect of this relation in individualizing the patients he says:

"In the special reports which I have submitted to the board during the progress of my visitation, I have, with a keen sense of pleasure, drawn attention to many touching evidences of the existence of this spirit, both in related and alien guardians, and I have frequently had to contrast, in my own mind, the position of an imbecile treasured by an unrelated guardian.

"I have had to contrast the condition of such an one with that of a depraved imbecile, a unit in an asylum population of 1,200 or 1,500, left to the mercy of a succession of chronic patients or male attendants. a helpless adult idiot, requiring to be carried from his bed to his chair and back again, with habits degraded from want of attention, unable to injure any one were he capable of entertaining an idea of doing so, is placed amongst thirty or forty lunatics of all classes, Imbecility under such circumstances presents a spectacle which would be ludicrous but for its inhumanity."

Again, page 123 of same report, Deputy Commissioner Fraser, after speaking of the classification of the patients in the asylum at Fife, naming them, for convenience, as *a*, *b*, and *c*, says: "Under the first head (*a*) is a case which struck me very forcibly. The patient who, when in the asylum, appeared to be a confirmed dement, and who was not at all distinguished for his industry or

usefulness, has, through the individualization which is characteristic of the boarding out system, and the many opportunities of occupation afforded by it, become self-supporting. I remember him as taciturn and slow in action, and as merely one of the crowd who daily went out to work.

“He is now an ‘orra’ worker in a brewery, earns his board and 3s. weekly, and has saved £16 within the last three years. His expression and conversation are now intelligent.” Under the class (*b*) he says: Three of the patients who, when in the asylum, were idle and had to be dressed, now assist in, and take upon themselves a definite portion of the household work. . . . It does not take long, under these conditions, to individualize the patient and to determine his or her appropriate sphere of work.”

There are other points of interest that might be passed under review, but I forbear. The subject is replete with interest to the humane mind. The practicability of the organization of boards of lunacy commission in this country is a fair subject for discussion. Whether the people are educated up to see the subject in its true light remains to be determined. Increased interest in the insane is being manifested year by year. Among the managers of the association of superintendents there are some who oppose the appointment of lunacy commissions, and all advances in the treatment of insanity; but it is the opinion of well-informed men that this portion of the association is gradually losing its influence; and that there is an increasing number of those who desire that this country shall not always be in the rear on this subject.

REPORT

OF COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

In the absence of Dr. Wainwright, the committee's chairman, I undertake a brief and hurried report.

Medical science, throughout the state, can hardly be said to have been affected, during the past year, by the discovery of new truths nor by the neglect of old ones. No new remedies of any special efficacy have been introduced into practice—no new modes of practice have been established.

The Rest Cure, which some physicians were eager—perhaps not too eager—to adopt, has failed of any marked success in private practice.

Massage and electricity are growing in favor again, but they by no means have yet secured the confidence of the majority.

The question of nourishment for the sick is everywhere receiving the intelligent consideration that its importance deserves.

Medical thought is active, especially as directed to the etiology and prevention of disease. Upon this, as upon imperishable and enduring foundations, our state medicine is yearly rising into majestic and dignified proportions—a beacon of hope to this and future generations, and forever a symbol of and monument to the medical profession of this age.

Surgery has been enriched, especially by the acceptance and practice of Bigelow's operation for stone. In a more general way it has been advanced and ennobled by the intelligent conservatism of its prominent and gifted men. On the other hand, it has been lamentably degraded by the gynecological fancies and vagaries that have infested the fevered minds of both the neophyte and the physician of more years, who alike with frantic struggles have pushed their planks upon this too popular wave.

The epidemics of the state have been most diligently and intelligently investigated by the secretary of the State Board of Health,

and by him most faithfully and fairly and fully presented in the Board's annual report. They who go to that report with the earnest and anxious inquiry, "Watchman, what of the night?" will receive responses not only constantly suggestive, but to a marked degree oracular.

Since the publication of that report, small-pox has held course onward, drawing into its loathsome embrace new communities, and rather laughing, one would say, at the flimsy materials that our conservators of public weal, with some puerile flourish, softly hold up as barriers to its progress.

During these spring months, suppurating otitis has prevailed to a surprising and unprecedented extent,* supplanting, apparently, the usual malarial ophthalmia of the season—an interesting feature, worthy of consideration.

Early in the season, the chairman of the committee sent out a series of questions to elicit information and opinions pertaining to pulmonary consumption. The replies were few. They may be summarized in the order of the questions:

PULMONARY + CONSUMPTION.

1. Has pulmonary consumption increased or diminished (as shown by town records) in your locality during the past five years?
2. What percentage of deaths have been due to consumption?
3. What percentage of cases of consumption are due to hereditary influences?
4. Is consumption ever caused, or promoted, by a wet or badly-drained location for the dwelling-house?
5. Is consumption ever caused by certain trades? Have any such cases come under your personal observation?
6. Is consumption ever caused by over-study in school or college?
7. What is the influence of intemperance as a cause or preventive?
What influence has the moderate use of alcoholic stimulants upon the development of the disease?
8. Can septic material, eliminated from the body of a person suffering from pulmonary consumption (either through the lungs or skin), and floating in the air, develop the same disease in another person?
9. Can such material infect bedding, wearing apparel, etc.? Can a healthy person contract the disease by using such articles, after having been used by a consumptive person?

* Great prostration attends the progress of the disease and follows after it.

† The word consumption is for convenience used as synonymous with phthisis pulmonalis and tuberculosis.

Answers to be sent on or before May 10th to the chairman of the committee, W. A. M. WAINWRIGHT, M.D., 453 Main street, Hartford, Conn.

REFERENCES.

ARTICLE XIV. The American Journal of the Medical Sciences for April, 1878.

"Is Phthisis Pulmonalis Contagious?" By W. H. WEBB, M.D., of Philadelphia.

ARTICLE XV. Same Journal, for July, 1878.

"Is Consumption Contagious?" By EDGAR HOLDEN, M.D., of Newark, N. J.

VOL. V. Ziemssen; Cyclopædia of the Practice of Medicine. "Pulmonary Consumption." By RUEHLE.

1st. No change in two reports, increased in four, diminished in ten (10). See Durham, etc.

2d. These are so varied that I record them: .8, 12.3, 4, 10, 3.2, 10, 5.6, 3.5, 12, 13, 14, 25, 10, 25, 5.5, 6.5, 10, 5, 5.9.

Here are eighteen localities, with an average percentage of 10.22. This is below the accepted percentage, and so far confirms the general impression that consumption is diminishing.

3d. The average percentage of sixteen localities is 62. Heredity here evidently includes parents, grandparents, uncles, and aunts. Here again the percentage coincides remarkably with the accepted average for heredity, which is about 60. This larger hereditary percentage also points to a diminution of consumption; since, with a larger hereditary proclivity, there is actually a smaller number of deaths than the heredity calls for.

4th. Fifteen answer yes; two, no.

5th. Seventeen reply yes; one, no.

6th. Eight reply yes; three, no.

7th. Ten consider intemperance unfavorable; one, favorable; one, as having no effect. Nine consider a moderate use of stimulants favorable; one, unfavorable; three, as having no effect.

8th. Thirteen answer affirmatively; five, negatively; one expresses doubt.

9th. Ten reply in the affirmative; eight, in the negative.

The eighth and ninth questions, which are the important ones in the series, have drawn out several papers, and illustrative and highly-suggestive cases, which will appear in the Transactions.

It will be noticed that a majority favor contagion; but that majority is small.

The following quotations are of general interest, 1st, with reference to the prevalence of Consumption.

Dr. R. W. Griswold of Rocky Hill, from 1867 to 1880 inclusive, in a population running from 1,000 to 1,100, the deaths from consumption were *nine*, while in the same number of years previous to 1867, with an average population rather less, the deaths from this same disease were reported as over fifty. There seems to have been a coincidence in time between the beginning of the so-called malarial diseases and their continuance and the marked diminution in cases of phthisis as well as of the continued fevers. Dr. Brandagee of Berlin, reports to me the same as true of that town, saying, "Consumption is almost gone."

Dr. Chamberlain, Hartford. Statistics show no marked decrease of consumption in the state during the last five or even ten years, the percentage of deaths from consumption has been about fourteen of the total mortality. In Hartford from 1871-75 inclusive the deaths were 304, from 1875-80 inclusive the deaths were 655, more than double, while the population has not increased in any such ratio, better returns account for part of the increase, but making due allowance the deaths have markedly increased during the last five years.

New Britain had from 1875-80 115 deaths, during the preceding five years 79 deaths. Allowing for increase in population there has still been an increase in the frequency of consumption. Enfield, Southington, Willimantic, and Bristol also show some increase. An analysis of the whole state would be interesting, did time permit. Enough has been given, however, to show that in places where the foreign population form a large percentage, consumption has held its own, as in Collinsville, Putnam, and similar towns, or increased as before mentioned.

Dr. Wordin, Bridgeport. The returns show an increase here during the last five years, for 1876 it was 11, '77 12.4, '78 10.4, '79 14.2, 1880 12.6.

Dr. Chamberlain, Cheshire. The percentage in 1880 is much larger than in any of the preceding five years, being 20.5, the average for the four years before was a little over 7 per cent.

Dr. C. J. Fox, Willimantic. Consumption has increased during the last five years. Nearly 25 per cent. of the deaths are due to this cause.

Dr. Matthewson, Durham. Gives the following percentages for Durham, 1854-5 40 per cent., '56-60 25 per cent., '61-65 14.4 per cent., '66-70 19½ per cent., '71-75 6 per cent., '76-80 5.9 per cent., seventy-eight cases in 374 deaths, 20.91 per cent. for the whole period. This also is a town where malarial diseases have existed to some extent. In Middlefield, an adjoining town, the percentage from 1866 to 1880 has been about the same, about thirteen with a slight decrease, during the last five years 12.9 per cent.

Dr. Lindsley, New Haven. Reports a marked decrease among native Americans, and an increase among foreign born, especially the Irish, but on the whole a decrease. Others mention the increase among the Irish population which other foreign nationalities escape.

Dr. Gardner, Hampton. Reports the percentages in periods of five years as follows:

Years.	Percentage.
1850-1855	19.6
1855-1860	22.8
1860-1865	17.7
1865-1870	16.0
1870-1875	14.3
1875-1880	10.5

Whole number of deaths thirty years 477, from consumption 81, percentage for whole period 16.9, last five years 10.5.

Dr. Lewis Williams, Pomfret. Gives the percentages as follows, from 1858-68 $12\frac{2}{3}$, 1870-80 $8\frac{2}{3}$, 1875-80 $5\frac{2}{3}$, for the whole period 1858-80 $10\frac{1}{4}$. This town is 600 feet above tide water, population largely farmers, no malaria. Dr. Lowell Holbrook, Thompson, reports no change during the last ten years.

Dr. Deming, Litchfield. States that up to 1880, consumption had been steadily decreasing, but in 1880 there were more deaths than in any of the four preceding years, still he believes the general tendency is to decrease.

In regard to the contagiousness of consumption,

Dr. Graves, Hampton. Has taken very carefully the history of one hundred cases, and the record shows hereditary predisposition in thirty per cent. This is very nearly the percentage stated by Fox of England. 25 per cent. he gives as due to hereditary predisposition.

Dr. Chamberlain, Hartford. I think a more careful study will show that fewer cases are due to heredity than has been generally supposed. Since my attention has been called to the subject by the statistics of consumption hospitals, prisons, and of the picked men of armies and navies, I have been surprised to see how many I have examined that present no hereditary taint.

Dr. Deming, Litchfield. While the contagiousness of consumption is still to some extent a disputed point, the remarkable researches of Musgrave-Clay, Gubler, Weber, and others, would seem to settle the fact that under certain circumstances it is certainly contagious. In order to have the contagion occur it seems necessary that the relations between the diseased subject and the person receiving the contagion should be of the most intimate and prolonged nature, the contagion being in itself of a feeble kind. Naturally, therefore, the relation of husband and wife is the one most favorable for its occurrence. The great number of cases stated by Musgrave-Clay show this to be the case, and also show that in the majority of the cases the contagion is from the man to the woman. This is undoubtedly largely due to the influence of the tuberculous fetus upon the mother.

A curious case in point is described by H. Weber: that of a man who

fatally infected four wives consecutively, none of whom had the least predisposition, hereditary or otherwise, to the disease. This man after the loss of his fourth wife declined to marry again, believing that it would be only exposing a woman to certain death. He died soon afterwards with tuberculosis, which was confirmed by autopsy.

It seems established also that young persons show a greater susceptibility to the contagion of phthisis than those in more advanced life. This fact no doubt bears some relation to the fact that the progress of consumption is much less rapid in middle age than in youth, and in many cases seems even to be entirely suspended.

Dr. Graves, Hampton, answers this question in the affirmative, after the period of softening, and relates the following instructive case: A. B., a very healthy, ruddy girl, married a consumptive, who died in eighteen months. Fifteen months after marriage she gave birth to a female child at term. For the last four or five months of her husband's life his breath was very fetid. She was with him constantly, and at the time of his death she had a slight cough, which never left her, and her general health was much impaired. Her general health soon improved, and she contracted a second marriage, which proved unhappy, and, her health failing, she returned home. She died of phthisis five years after her husband. The child died at sixteen years of age from hemorrhage; was always feeble; never had menstruated. A younger sister nursed A. B., and perished in four years from phthisis. A. B.'s father died at eighty years, "senile softening of brain." Mother alive at ninety, hale and hearty. Four sisters and one brother in good health; ages from fifty-five to sixty-eight years. "Never had consumption in our family."

The influence of trades and occupations in the production of varieties of consumption is generally conceded. Cases are given of stone cutters, grinders and polishers of metals, and buffers that are working with an emery wheel on leather, especially when the wheels are run by power in a room set apart for this purpose; workers in dust, like rag sorters, etc., developing phthisis, the sputa in these cases often shows mineral or metallic particles, as the case may be, also of the predisposing influence of sedentary occupations, especially when carried on in illy-ventilated rooms or damp dwellings. One case was mentioned in which a house had been noted for the number of deaths from phthisis occurring in it. On tracing its history, it was learned that one or more deaths from consumption had taken place in five families that had lived there successively; in two only was there hereditary influence to account for the development of the disease.

It would appear that consumption has decreased in some localities, held its own in others, and increased in other towns. The

only general fact that can be deduced from the material on hand, is that the disease has increased among the foreign born and those of foreign descent, whose parents were born abroad, especially the Irish race and Irish females, and has decreased among the native born population, as shown by the returns from towns where this is the predominant element. Where there is a large foreign population, the alleged improvement in treatment, or the implied decrease and milder type of the disease, or the prevalence of malaria have no influence. The mortality still increases. Statistics show that the percentage increases as indoor occupations increase, and *vice versa*, and our State is no exception to the rule.

L. S. WILCOX, M.D.,
Acting Chairman.

HARTFORD COUNTY.

HICCOUGH ARRESTED BY QUININE AFTER CONTINUING
TWELVE HOURS.

IRVING W. LYON, M.D., HARTFORD.

Mrs. G. M., aged 32, weight 234 lbs., from excessive adipose development, was attacked with sciatica in February, 1880. I considered it malarial and prescribed full doses of quinine successfully. After this the sciatica occasionally returned, but was always relieved with quinine, a good deal of which was taken during the season.

On Monday, March 7, 1881, at 9 P. M., the patient was seized with hiccough, attended with eructations and much epigastric distress; this lasted continuously two hours. The next evening at the same hour the same symptoms were repeated; they lasted also two hours and were very distressing to the patient, who felt much alarmed. The next morning, Wednesday, March 9th, at 8 A. M., the hiccough returned in a more intense and violent form than on the preceding occasions. I saw her at about eleven o'clock, found her in bed suffering with violent hiccough, the spasmodic efforts following each other in rapid succession and attended with noisy eructations and moans. The patient could ejaculate but two or three words between the hiccoughs, and she and her friends were very much excited and alarmed. She complained of a very painful and distressing sensation at the epigastrium. On account of these symptoms and the very agitated state of her mind, I prescribed a teaspoonful of the following mixture:

℞ Spt. Lavand. Co.
Tr. Valerian, āā ʒvi.
Spt. Ether Co., ʒiv. Mx.

with directions that the dose should be repeated every hour till relieved. At 2 P. M. she was just the same as when I first saw her. The epigastric distress seemed to call for an anodyne, and I injected hypodermically twelve minims of Magendie's solution of morphine before leaving the house. This brought no relief, and the evening found her just as she had been all day. Feeling quite certain that her sciatica had been malarial, and having seen cases of malarial dyspepsia attended with noisy eructations occurring in spells, I resolved to try quinine. At 8 P. M., just twelve hours after the beginning of the attack, she took ten grains of the sulphate of quinine. In thirty minutes she began to be easier, the improvement continued, and the hiccough soon after ceased entirely. Quinine was given the next few days, and there has been no recurrence either of the hiccough, eructations, or epigastric distress. I have hardly any doubt but that the symptoms in this case were due to the malarial poison.

PYONEPHROSIS.—GRADUAL RECOVERY AFTER REMOVAL OF TWENTY-EIGHT OUNCES OF PUS.

IRVING W. LYON, M.D., HARTFORD.

Mrs. J. S., aged 37, married, mother of seven children, the youngest born Sept. 3, 1879, first consulted me at my office June 27, 1880. She was very pale and weak, and gave the following history: Had taken cold five weeks previously by removing her flannel undershirt, and the next day, while in a free perspiration, changed a thick woolen dress for a thin one and then sat in the open door. The same night was seized with chills, severe pains in the back and shoulders, and felt lame and sore all over. These symptoms were attended with fever. On the second day she began to vomit and to pass turbid urine.

After two weeks was able to be up and about the house, but at that time began to have pain in the left lumbar region. This pain, the vomiting, and the turbid urine had continued down to her visit. I found the urine loaded with pus, the deposit after twenty-four hours being about one-fourth the quantity passed.

Examining the abdomen, to which she drew my attention, a tumor in the left side was discovered extending from the costal cartilages above to the iliac fossa and laterally nearly to the umbilicus. It was smooth and globular, measuring eight inches in its diameter, and was moderately painful upon pressure.

The pus in the urine was the key to the diagnosis of a sacculated kidney; the tumor was globular rather than elliptical, and did not extend into the left hypochondrium, as an enlarged spleen is apt to do. The prognosis was considered unfavorable. A milk diet was recommended and remedies prescribed to allay the vomiting.

I next saw the patient July 3, at her own house; the vomiting had been in a measure relieved, and the tumor had not increased in size.

July 10th, I aspirated the kidney and drew off twenty-eight ounces of pus. The pus flowed freely and no untoward symptoms attended or followed the operation.

Aug. 6th. Came again to my office; was still very weak, but her general appearance had somewhat improved; the vomiting had grown less but had not yet disappeared; appetite poor, pulse 110. The tumor was found to be about one-half its former size. She said that she was passing little urine, and the specimen she brought deposited a deep layer of pus.

Sept. 9, 1880. Mrs. S. called to-day at my office; walked from the railroad station; her face is ruddy, with a clear, healthy look. She has ceased vomiting, the appetite is good, and her strength very much improved; pulse 84; the pus in the urine has been steadily diminishing, so that the deposit is now very slight. Upon examining the tumor it is found to be only about the size of a man's fist.

April 18, 1881. I called to-day upon Mrs. S. She has the appearance of a person in perfect health, though she says that she has not yet fully regained her former strength. She is doing all her own housework, having on Monday done the washing for her family. A careful examination of the abdomen failed to detect any trace of the former tumor. She says, however, that there is yet some pain in the left lumbar region. Her appetite and digestion are good, the bowels regular, and the urine appears to be pretty nearly natural in amount and in appearance. A specimen brought away for examination showed very little deposit, with only here and there a stray pus globule under the microscope.

LACERATIONS OF THE CERVIX UTERI.

GEORGE C. JARVIS, M.D., HARTFORD.

As it has fallen to my lot to have some experience in the treatment of lacerations of the cervix uteri, since Emmet gave to the world the benefit of his discovery, it seems desirable to place upon record the results that have followed this treatment in my hands, while the subject is so generally exciting interest in the profession. Without entering minutely into the details of cases, I will endeavor to summarize as briefly as may be some of the salient points. In forty-seven cases that have been treated by me, five were so complicated with hardened tissues about the uterus (results of chronic pelvic cellulitis) and adhesions, that an operation was deemed unsafe after a prolonged preparatory treatment to relieve the surrounding inflammation. In nineteen of the cases the success following treatment to favor healing of the laceration, resulted in so much improvement that an operation was not required, nor has any subsequent trouble ensued in such of the cases as have remained under my observation, which have all continued in fairly good health, the torn surfaces having healed over.

In twenty-three cases an operation was found necessary. Two of these were treated by the actual cautery to the whole of the discharging surface of the lesion, with marked improvement in the general health of the patients. The cautery was preferred in these cases because the everted portion had become so badly broken down and spongy that the success of an operation by sutures was rendered very doubtful. The results were all that could be desired.

In three of the twenty-one cases operated upon by suture the denuded surfaces united incompletely; in one of the three the union was complete on one side, partial on the other; the improvement in general health, however, was so satisfactory that consent to a second operation could not be obtained. In the remaining eighteen, the results were all that could be asked for from any operation, both in regard to the local lesion and the improvement in the general health. The change from mental depression and a general gloomy feeling to light-hearted cheerfulness is a very gratifying result of an operation in the case of a badly lacerated cervix, with its train of consequent evils.

As to the real value of the operation, there can now be no doubt it has won a permanent place as one resulting in great benefits in proper cases, nor are the risks enough to furnish any valid objections to it; that there is some danger attending it is true, but this can also be said of all surgery.

As to the manner of operating. I have for the past three years used the broad short blade, double lever speculum, and for this operation in particular I must say I much prefer it to Sims' speculum. It is easier for the patient, operator, and assistants. Then also the two blades can be made to act as a clamp after the sutures are in place, and can be made to aid the sutures in bringing the prepared surfaces into apposition. But a very weighty reason, especially to the general surgeon is, that a skilled and trained assistant is not required to hold the speculum, in fact it is almost self-retaining. The need of a speculum that will enable the operator to dispense with the trained nurse or assistant, has long been recognized, and Emmet and others have endeavored to contrive a self-retaining speculum, but the results have been for the most part cumbersome and extremely complicated, interesting as pieces of ingenious mechanism, but with no practical value. The general surgeon or the specialist away from home, by the use of the speculum which I have described, and which I have somewhat modified,* can operate without trained assistants with certainly as great facility if not greater, than by the use of Sims' speculum and skilled aid. This is a point of considerable importance, as the many abortive efforts to secure a self-retaining speculum show.

* This speculum is manufactured by J. Reynders & Co., New York.

TUBERCULOSIS OF THE MOUTH AND PHARYNX.

C. W. CHAMBERLAIN, M.D., HARTFORD.

A few years since I presented an essay on laryngeal phthisis, primary and secondary. Since then many different phases of that disease have been under my observation, and with them well-marked instances of tubercular deposits and ulceration in the mouth and pharynx. The latter, while now recognized as rather infrequent manifestations of the disease by specialists, have not been much considered in the general literature of the subject. While the phases of laryngeal phthisis alluded to are exceedingly interesting, I shall defer their consideration until some future period, and relate briefly several cases of pharyngeal tuberculosis, and one of the mouth.

CASE 1. *Pharyngeal tuberculosis*.—The patient, A. P., a boy aged 14, of foreign birth; no hereditary predisposition to lung trouble could be ascertained; parents living, in good health; grandparents on father's side living, on mother's side, dying of typhus fever after a famine in Ireland. The boy had been subjected to considerable hardship, poor food, poorly clad, and badly lodged; he worked in a brick-yard, exposed often to wet and cold, and the work heavy beyond his strength; he was short for his years, considerably emaciated, appetite, however, good, but food coarse and ill cooked. There were, when first seen, no symptoms of lung trouble ascertainable on careful examination by stethoscope and percussion; anæmic murmur; feet swelled at night. On examining the pharynx three characteristic tubercular ulcerations were seen, with raised edges and irregular granular surface of a grayish color; the central and largest of the three was also deeper and red in the center; the destruction of tissue had extended through the mucous membrane to the muscular tissues below; the pale, sodden internal edges showed the traces of the mucous and sub-mucous layer. The pharynx generally was very pale and anæmic, except around the edges of the ulcers and the two or three elevated patches where tubercular deposits had taken place, but had not broken down into ulceration. Tongue of a pale red color, deeply fissured. Syphilis congenital and acquired was carefully excluded after rigid examination. The glands in the neck anteriorly were enlarged, and there were cicatrices of two cold abscesses on each side of the neck. The teeth were badly decayed, the gums swollen, spongy, and anæmic. This case is especially interesting, as the first expression of the disease was apparently in the pharynx. It illustrates Rindfleisch's theory that tuberculosis is secondary to scrofula; the deposits in this case were secondary to the scrofulous abscesses in the neck. Treatment, general and local, was of little benefit. The ulcers

were very painful, and the best application was a ten-grain solution of iodine in sweet oil. Three months after this, the patient being seen twice a week, tubercular symptoms were discovered in the larynx, which up to this time had shown no symptoms under repeated and rigid examination. This ran the ordinary course, except that very soon after lung symptoms appeared, although it was difficult to determine the exact period as the cough was equally due to irritation in the throat. When established, however, pulmonary tuberculosis ran a rapid course, and in a little over a year from the appearance of laryngeal symptoms death ensued.

CASE 2. *Tubercular ulceration of the mouth.*—Millie S., a girl aged 15, family history good; no evidence of phthisis or syphilis; badly nourished, poorly housed, anæmic and scrofulous, pale, chalky skin, somewhat emaciated; habits good; works in a corset manufactory; sleeps in a middle dark room with her three sisters; cough, and evidence of consolidation at apex of left lung; bronchial breathing; flatness on percussion; below, region of dullness, prolonged expiration, and mixed rales. Can eat no fat, is not fond of meat. On examination the characteristic tubercular ulcerations, as described in case first, were discovered on the middle left border of the gum, on the outer side of the lower jaw, and on the right gum of same jaw, outer aspect; mouth and pharynx anæmic, the latter studded with yellowish elevated patches, several of which afterwards broke down into ulcers. Gums spongy; teeth yellow, covered with tartar; tongue pale red, deeply fissured longitudinally. Treatment, iodine and sweet oil to ulcerations; caustic applications tried, but did harm; carbolate of iodine inhalations, cod liver oil, and tonics. Under this treatment the ulcers after a tedious time healed very slowly, and the mouth and pharynx regained their natural color to a considerable extent. The lung symptoms and general condition did not improve much, indeed the disease steadily advanced. There were no laryngeal complications. Fortunately she had a chance to live on a farm in a mountain town in northwestern Massachusetts, and soon her convalescence became established. She now presents no trace of lung trouble, except that a small portion of the apex of the left lung is apparently permanently consolidated. Otherwise to all appearance you could not find a more perfect specimen of health, a full, well-rounded figure, well-proportioned weight to height, and a clear, ruddy complexion. Nearly two-thirds of the time is spent out-of-doors in the care of large flocks of poultry, and a large and well-appointed dairy. With this life there is little danger of the return of disease.

CASE 3. *Tuberculosis of the pharynx.*—J. B., a boy aged 19, consulted me for chronic sore throat. He appeared to be considerably enfeebled; had a persistent dry cough, and complained of night sweats. Mother died of consumption, also one sister had been much with them ministering to their wants. Left lung clear throughout; at apex prolonged and incomplete expansion, feeble respiration, fine rales. Right lung

normal. On examining the throat tubercular ulcerations were found on the posterior pharyngeal wall, cup-shaped, with ragged, everted edges, and tubercular deposits near the palatine arches; these afterwards became ulcerations. The characteristic appearances of the mouth and throat as before described were well marked, the uvula was much swollen, œdematous, and troubled him by causing a constant tickling when he laid down, often preventing sleep. He had great difficulty in swallowing; the food was often rejected when it reached the pharynx, and swallowing was accompanied with a burning pain, whether liquids or solids were taken. In the course of two months these ulcerations had grown deeper, and there were four small, shallow ulcerations with a grayish, granular surface in addition; no material change in the lung symptoms. Liquid food was now the main nourishment. The only relief afforded was in the contraction of the palate by astringents, and removing a portion by pencilings with nitrate of silver. Opiate applications locally relieved the pain, and by repeated gargling with pure sweet oil he was able to eat a full meal occasionally. The tumefaction in this case was well marked. The larynx soon became involved, and the tumefaction was so great that the vocal cords were hidden, and breathing became difficult and often spasmodic. He rapidly grew weaker, and died rather from exhaustion and the filling up of the larynx than from any other cause. Tracheotomy was strongly urged and refused absolutely. It would have prolonged life and afforded great relief, and ought to have been performed. The voice was soon impaired and entirely lost several months before death.

Post mortem. Tubercular deposits in upper lobe, left lung, and points of consolidation; no cavities; the other portions of the lung were normal, except that they were markedly emphysematous, entirely filling the pulmonary cavities, due doubtless to his labored respiration. Heart somewhat hypertrophied, especially right side. Abdominal viscera healthy, except kidneys, which were somewhat granular. Larynx œdematous and apparently entirely closed, but during life there doubtless had been a small opening; small tubercular ulcerations, with everted borders and ragged surfaces, studded the portion above the vocal cords, which were very much atrophied from disuse; minute granular elevations along the tracheal walls, especially in front.

Microscopic examination of the granular deposits and ulcerations of the pharynx presented the same elements as the tubercular deposits in the lungs. The mucous and sub-mucous layers of the pharynx showed tubercular infiltration, cell infiltration in masses, amidst which giant cells were seen, a marked increase of cells in all stages of development. The ulcer edges showed a stroma or mass of interlacing fibers, with cell infiltration, showing decay as well as development, and debris of the normal elements of the tissues.

This case was very valuable, as a careful study of the deposits

enabled me to satisfy myself of the tubercular nature of the ulcerations in both pharynx and larynx. These ulcerations are clearly diagnostic; the yellowish-gray, semi-solid infiltration which precedes ulceration, and the peculiar appearance of the ulcerations, so different from any other variety, together with the accompanying anæmia of the surrounding tissues, especially at the onset of ulceration, are all distinctive; when once seen they are ever afterwards recognized at once. The floor of the ulcer, as has been stated, is of a whitish gray and irregular, as are the margins from the successive breaking down into ulceration of the small, granular deposits. These lesions of the mouth and pharynx are rare; in seventy-five cases with tubercular complication of the upper air passages, I have seen but one of the mouth and three of the pharynx.

SOME INQUIRY INTO AND OBSERVATION ON THE ETIOLOGY OF INTERMITTENT FEVER, AT PRESENT PREVALENT IN THE VALLEY OF THE LOWER CONNECTICUT.

RUFUS W. GRISWOLD, ROCKY HILL.

In March of the present year, I addressed to physicians in the Connecticut valley from the mouth of the river to the Massachusetts line, a printed postal of inquiry, as follows:

“Have you had intermittent fever in your town the last few years? When did it first appear? To what do you attribute its rise and prevalence? What local causes have you likely to breed malaria and develop intermittent fever that had not existed in the years previous to its appearance in your neighborhood?”

The object of the inquiries was—first, historical, as of some possible worth to those who may succeed us in the practice of the profession; second, the elucidation of such information as might perhaps throw some light on the ultimate cause of the present prevalence with us of intermittent and the allied disorders; and third, a basis for criticism upon the theories advanced to account for its rise and progress.

A like circular was addressed to one hundred physicians, covering Clinton, Westbrook, Old Saybrook, Essex, Saybrook, Killingworth, Chester, Haddam, Durham, Middletown, Cromwell, Berlin, Wethersfield, Hartford, New Britain, Southington, Plainville, Farmington, Canton, Simsbury, Granby, Windsor, Windsor Locks, and Suffield, on the west side of the river; Old Lyme, East Lyme, Lyme, East Haddam, Colchester, Chatham, Portland, Glastonbury, Manchester, East Hartford, South Windsor, East Windsor, Enfield, and Vernon, on the east; with the

small addition of my place of residence, subject to personal observation. This field seemed large enough to gather something out of that might be of worth ; but replies are not always easily elicited. Dr. Wainwright, of Hartford, in making return to the inquiries, closed with this observation : " I hope you will get sufficient answers to be of some benefit, (but) judging from my experience with our brethren, as chairman of the committee on matters of professional interest, I have my doubts." The number of replies was not as large as was hoped for, but was up to the average at least, and beyond what was expected ; and are sufficient for a foundation on which to work. Out of them are obtained, as regards appearance and progress, as follows :

Westbrook.—Intermittent fever first appeared in 1875.—Dr. Gilbert.

Niantic, East Lyme.—First cases in 1876. Has increased every year since. Saw three cases in 1876, twelve in 1877, thirty-four in 1878, forty-five in 1879, sixty-four in 1880.—Dr. Munger.

Old Lyme.—Time of appearance not given.—Dr. Harris.

Hamburgh, Lyme.—First appeared in September, 1877.—Dr. Ely.

Essex.—Within three years.—Dr. Hubbard. This would be 1878.

Haddam.—In 1872.—Dr. Hazen.

Moodus, East Haddam.—For the past six years at least. Four miles below, on the east bank of the Connecticut river, a year or two before it appeared in this village, and gradually passed up the stream.—Dr. Bell.

Chester.—First indigenous cases about five years ago. This would be about 1875 or 1876. It appears four miles back from the river and railroad, and on the hills as well as in the valleys.—Dr. Turner.

Glastonbury, South.—Summer of 1872.—Dr. Rising.

Durham and Middlefield.—Intermittent fever invaded Middlefield about six years ago on several of the hills, more especially near the border of Wallingford. In Durham there were one or two cases a year till about three years ago, when it appeared near a flooded swaup, and has increased in the vicinity of that every year, and last year there were nearly a hundred cases within a mile of the swamp.—Dr. Matthewson.

Berlin.—Intermittent since about 1872. First cases were in the course of the Mattabessett river, which it followed up to the smallest springs. Trap elevations it has avoided. Not a single case has appeared in the main street of Berlin, extending four miles, while in East Berlin and Kensington it makes annual visits.—Dr. Brandegee.

Wethersfield.—The first case originating here was in 1864. Had an attack myself in 1865.—Dr. Warner. Have had intermittent since 1870.—Dr. Fox.

Hartford.—Seven or eight years ago.—Dr. Campbell. Eight to ten years ago ; with the intention of staying, about 1872, after the completion of the Valley road. Was most prevalent for a long time in the eastern part of the city, along the line of that road. Think there was none of it in the western part of the city before the Connecticut Western road was built, and new streets, etc., cut down.—Dr. Wainwright. The

first case of local origin that I knew about was in 1872, in Mulberry street.—Dr. Lyon. Dr. Warner of Wethersfield, says that Dr. Clary, then of Hartford, now of New Britain, related to the Hartford City Medical Society a case of indigenous intermittent occurring in Hartford as early as or earlier than 1862.

Bloomfield.—Appeared about three years after it began in Hartford.—Dr. Gray.

Plainville.—First appearance somewhat uncertain. Some cases were here eight years ago, which seemed to be developed in persons who had lived in malarial sections elsewhere. Had become common three years ago, and has increased.—Dr. Buell. First appeared six or eight years ago.—Dr. Wright.

Canton, Collinsville.—One case in 1870. The two following years one or two cases, with a gradual increase since. Has worked up the valley each year, and also further up the hills, following the course of a stream.—Dr. Shepherd.

Simsbury, Weatogue.—First appeared in August, 1878, and has increased.—Dr. White. *Tariffville*.—Appeared in summer of 1879.—Dr. Sanford.

Granby.—About 1878.—Dr. Edwards. Imperfectly developed intermittent the last year.—Dr. Allen.

Suffield.—Intermittent since 1877. The first native case was in a meadow, between a canal and a brook, near the site of an old dam; the second was on top of a hill, exposed to the winds from the four points of the compass, and also to the sun.—Dr. Mather. Appeared in 1877.—Dr. Mason.

Manchester.—Intermittent first in the spring of 1878. Prevails most in localities adjacent to mill-pounds and a large swamp.—Dr. R. M. Griswold.

South Windsor.—I think four or five years ago.—Dr. Wood. For the past six years. It began in the southern end of the town, and advanced year by year till the whole town was affected. It came earliest, remains longest, and is most severe in low places and about swamps and mill-pounds.—Dr. Rockwell.

East Windsor, Broad Brook.—Very few cases previous to 1877. Since then has increased year by year.—Dr. Allen.

Enfield.—Began some five years ago.—Dr. Strickland.

From sources outside of this correspondence, I have been able to learn that there were cases of intermittent in Essex in 1869; in Portland in 1868 and 9; in Middletown and Cromwell about the same time; in East Hartford in 1872; in Rocky Hill the same year (except a single case in 1859); in New Britain about the same time; and in Windsor in 1876. This nearly covers the field I undertook to gather information from, and gives fair results as to the beginnings of malarial diseases in the different sections of the valley; and allows us to proceed to the consideration of

the supposed causes in the towns heard from, as presented by our correspondents.

Dr. Gilbert "knows of no cause for its rise and prevalence," and "knows of no local cause that has not existed for years." Dr. Hubbard has no "theories as to its rise and prevalence," and "knows of no local causes, in the majority of cases, adequate for the production of the disease which did not previously exist." He thinks hepatic disturbances more often stand in causative relation to malarial diseases than influences referable to external causes. Dr. Bell has "noticed the disease more especially near the mill-ponds, which are generally very low in the summer, leaving considerable surface uncovered by water," but does "not know that the mill-ponds have been any more dry latterly than the years before." Dr. Turner has no theories as to cause,—says: "We have no local causes that have not existed for years. The streams and ponds are the same." Dr. Rising thinks "the disease has gradually migrated this way from the New Jersey flats," and knows of no local cause which had not been operating before, unless the streams are lower during the summer months than previous to 1872." Dr. Fox speaks of the appearance of the disease about the time of the grading of the Valley road, "but is not prepared to say what is the cause." "There is nothing new which had not existed in previous years, except the Franklin avenue sewer at the north end." Dr. Warner has "no theory of cause." "There are no local causes apparent." Dr. Campbell has no theory, and is not aware of any local causes likely to breed malaria, that had not existed previous to its appearance. Dr. Lyon attributes the rise of the disease to "some influence which approached Hartford from Wethersfield," of the "nature of which he has no knowledge." and thinks "the doctrine that it is due to vegetable decomposition is destined to modification;" that "there are no new local causes to explain the manner of its gradual appearance here and elsewhere," and that "we should have had it if the Valley road and the Franklin avenue sewer had never been built." Dr. White does not know to what to attribute the disease; "there are no new local causes that would be likely to develop it." Dr. Sanford knows of "no cause unless it be a gradual change in temperature or atmospheric influences;" knows of no local cause in his vicinity. Dr. Edwards "don't know" to what to attribute the disease; there are no new local causes. Dr. F. F. Allen knows of no local cause other than has always existed. Dr. Mather "attributes the disease to atmospheric influences;" "its rise may be due to continuity with the malarial air south of us." "We have no local causes that have not existed for years." He says: "I have had it every year since 1871; but I live high and dry; the wind that strikes my house comes direct from the North pole, and the building lot drains itself away from the house. The hot sun, with fatigue, brings on an attack; never dampness, or rain, or night air. My experience is that malaria, like

yellow fever, is most intense in perfectly clear dry weather, interrupted by no showers or rainy days." Dr. Wood says: there are no new local causes in his neighborhood to produce intermittent; he attributes the disease to "the introduction of manure from New York from the malarial districts." Dr. Rockwell does "not know to what to attribute its rise." As to local causes, the opening of the Central road has been mentioned in the connection, but he does not think that has anything to do with it. For some distance around the mill-ponds the disease is more prevalent, but the ponds are not new features in the town. Dr. Allen does not know to what to attribute the disease; "There is no cause I can discover that may not have existed for some years before the outbreak." Dr. Strickland has no theory of cause. There are no local causes not before existing. Dr. R. M. Griswold can "attribute its rise and prevalence only to some influence emanating from those localities where it is most prevalent"—swamps and mill-ponds; but "these have all existed for a long time, and I can assign no reason why the malaria should appear now, when the same apparent causes have existed for years." Dr. Ely attributes the disease "to the extreme drouth which dried up the streams and ponds, so that the vegetable deposits of fifty or more years were for the first time exposed to the action of the sun and extreme heat. The local causes are low ponds and streams, lower springs, consequently vitiated water; and from the low state of the river, stagnant marshes, etc." It does not appear that there was anything new about these. Dr. Brandagee says: the disease "scemed to come to Berlin in two directions—by the Quinmpiac (probably through the Southington gap) and from the Connecticut—up the Mattabessett. No local cause can be assigned for its advent, or for the choice of localities. It is noticeable that where new cellars have been dug or new ground turned up, there it is more apt to appear." Dr. Hazen says: they have two stagnant ponds made by the building of the Valley road, "in the vicinity of which have been the greatest number of cases." "Other than these stagnant pools, I know no new causes for the existence of malaria which were not in existence before the road was built." Dr. Munger thinks that "in some instances he has been able to trace the cause directly to bad drainage," but in the majority of cases could not satisfy himself. "I do not know of any local cause that did not exist previous to the first appearance of the disease." Dr. Buell speculates that the cause may be "organic germs of cryptogamous plants, and perhaps organic detritus in the form of impalpable dust, the former nourished and developed in stagnant water and moist soil—the latter the result of decay of organic matters, and both liberated and disseminated through the atmosphere by heat and currents of air. Or various poisonous gases, liberated from decaying organic matters; again, the influence of certain obscure atmospheric, thermic, electrical, or solar agencies, which disturb the equipoise of the human organism,

and develop the symptoms which constitute the disease." We have no local causes likely to breed malaria which did not exist prior to its first extensive appearance. Dr. Wright "cannot account for its rise and prevalence here." "Knows of no local causes that had not existed in the years previous to its appearance." Dr. Wainwright speaks of the disease first prevailing in the region of Hartford where the ground was dug up for the grading of the Valley road, and gives his judgment that this disturbance of the soil for this special purpose, and for the formation of city streets, etc., "has had a great deal to do with the appearance and spread of malaria." He also speaks of the practice of spreading the collected street dirt and filth over other streets, as a possible cause. Another thought presented, is the possible connection of the drinking of the ponded and surface-collected water from the Trout brook reservoirs, with the rise of intermittent; Dr. W. saying "it is certain we had no malarial diseases before that was introduced;" and he gives as bearing upon this point the fact that, in his own family of twelve persons, where well water is exclusively used for drinking purposes, there has never been any malarial disease. Dr. Matthewson, after noting the existence of intermittent in his drive for about six years, in scattered cases, first coming from the north in the direction opposite to which the streams run, says that about three years ago it began to prevail extensively about a ponded swamp, situated on high land, and filled with grass and stunted bushes, and has continued to increase in that neighborhood, while the other parts of the town have presented but few cases. The doctor does not say that this pond is the cause of the intermittent around it, but it is to be inferred that he judges it to be. He also speaks of a similar pond about five miles south, in the town of Guilford, which about thirty years ago was raised three or four feet, and about which some eight years ago intermittent began largely, and prevails when the pond is drawn down to its original capacity, but does not prevail to any great extent in years when it is not drawn down. Dr. Shepherd attributes its rise to a specific poison which had been for some years advancing up the Quinnipiac valley, and over into the Farmington, and up that river to Collinsville, and later to New Hartford and beyond. He thinks "the specific poison is capable of being conveyed by atmospheric or hydraulic agency, and when deposited under favorable influences, is rapidly developed, and furnishes material for further advancement." He says: "In no other way can I explain its appearance here and in many other places, where the same local conditions have existed for years previous to its appearance." Dr. Gray "knows of no cause for its prevalence." "We have no local cause likely to produce malaria and develop intermittent that had not existed in all the years previous to its appearance." Dr. Mason thinks "atmospheric epidemic influences" cause the intermittent. "There are no local causes whatever." Dr. Gurdon W. Russell thinks intermittent is due to the presence "of certain germs or spores, which find their natural habitat in marshes,

near ponds, etc. When these germs make their appearance they naturally take to moist, undrained lands; these places are where they live and flourish; and the malarial element is diffused from these localities. Why these germs have not made their appearance in years past is what no man can tell anything about. When they appear they select certain localities, just as certain animals and plants do. There is a great mystery about the whole matter."

I have thus given, as briefly as possible, and I believe fairly, the views of my correspondents as to the causes of our intermittent fever and the cognate disorders in the localities where they reside. I now propose to submit them to some analysis and criticism, with the view of seeing how far they will hold good, and what is to be determined from them. Theories which will not withstand logical examination are not proper bases upon which to build science; deductions which will not bear sifting should not continue to possess us. The old theory of malarial emanations from vegetable decay, as the essential factor of intermittent and remittent fevers, does not satisfy the inquisitive scepticism of the age; it does not account for all the phenomena presented to us. A noticeable evidence of this is to be found in the fact that the majority of our respondents, although they are presumably acquainted with the various theories that have been from time to time presented, find that their personal observations not only do not confirm the validity of those theories, but that they contradict them, and so leave the mind in that condition of uncertainty which is expressed by the "I do not know." The point of especial prominence presented in our letters, as regards the causes of malaria, is the uncertainty and unsatisfactoriness of the deductions and speculations deduced. Were there somewhere a reliable ground upon which to stand—a tangible basis upon which to build—the existing diversity of views would vanish, and conflict be supplanted by harmony; but that reliable ground is not under us—the tangible basis does not exist. Let us examine a little in detail.

One of our correspondents (Dr. Wood) attributes the intermittent of his neighborhood to the importation of manure from places where the disease has longer existed. Although this view is not taken by any other of the respondents, the writer is very far from being alone among his neighbors in his theory. In the Connecticut seed leaf tobacco region on the east side of the river from the straits to the Massachusetts line, there are hundreds of farmers' families of like opinion; and they have this certain fact as a basis for it: they did not have malarial troubles previous to the introduction of the manure, but they began having them very soon after. Here is a striking coincidence which is so much of evidence of effect from contiguity of supposed cause; and if the introduction of the disease has been by some mode of importation from beyond, it is not easy to determine any more tangible method of transportation than is afforded by a scow-load of manure and rotten garbage

from the stables and slums of our commercial metropolis. Examined by itself alone, the condition presents presumptive proof of causative connection. But the fallacy of the deduction becomes apparent when we note this other fact, that there are other regions of the state into which not a forkful of this manure has ever been carried, but where they have the malarial diseases just the same. Into the town where I reside there has been no importation of this manure; but we have had intermittent right along since 1872, and I know of but one locality on the river where it has been any worse. If the disease had depended upon the introduction of this factor, we should not have had it; it has prevailed without the presence of that factor; and if it prevails in one place where that special supposed factor does not exist, nor ever has existed, the irresistible conclusion must be that some other potency capable of generating the disease has been engaged; and if that other potency gives us the trouble where there has never been any of this manure, it is reasonable to suppose that that potency, and not the manure, is alike the cause in the one case as in the other.

A further illustration of the cogency of this logic is afforded from a like application of it to the suggestion of a possible connection between malarial manifestations in Hartford and the use of the ponded Trout Brook water. It is since the introduction of that water that intermittent and the like began in the city; and the fact that a family which has not used that water has been exempt from malarial diseases, is so much evidence of a possible relation between the ponded water and the disease in the cases of those who have used it. The points of connection here are quite as probable as in many other instances encountered. Dr. W. has not made up his mind that there *is* any connection between the water used and the malarial troubles, but he thinks the facts worthy of mention in the consideration of the subject. Now, if there were anything in the suggestion that perhaps malarial diseases are induced in residents in Hartford by the use of this collected surface-water, and immunity comes from a resort to the well instead, then it ought to follow that the rural inhabitants of this section of country, thousands of whom never sample Trout Brook water, but depend entirely upon their wells, should not have intermittent fever. But notwithstanding, they *do* have it right along.

Another suggestion in relation to the etiology of the subject which presents itself for examination is the matter of disturbance of the soil, especially in the construction of railroads and sewers. In the consideration of this I do not propose to go outside of the geographical field included in my inquiries, for the sake of obtaining illustrations against the theory involved in that suggestion. The territory we are engaged on is crossed by, besides the newer roads, the Shore Line road at the south through five towns, by the Canal road on the west through six, by the New Haven & Springfield through six, by the N. Y. & N. E. through

seven, and by the Middletown branch through three,—all of which were constructed several years before any cases of malarial disease occurred near them. Excavations, upturnings, transfers, fillings of dirt and rock were made; but we have no evidence that a solitary case of intermittent fever occurred in connection therewith. It was not till years after they were finished, their banks consolidated, and many of them overgrown with turf, that malarial diseases appeared in their neighborhoods. Now it is along the lines of all of them. And it is pertinent to enquire: If the disturbances connected with the construction of other like works since have produced intermittent fever, why was it not obtained out of these older ones also? Like causes should give like effects. If the building of a road, say from Middletown to Hartford, caused ague and fever, why did not the building of another road, at an earlier period, through a much more likely section, namely, from Middletown to Berlin, give us the same disease? The latter road was built twenty-five or more years ago; but we cannot learn that a case of intermittent occurred along the line of it till the year of 1872, at the same time that it put in a pronounced appearance in other sections. Further, as against this theory of upturned earth as a cause, it must be noticed that where there has been no upturning, ague and fever flourish alike as where there has. As example, it began in Rocky Hill in the summer of 1872, about a year after the building of the Valley road, and should have begun the year before, if soil disturbance for the construction of the road-bed had anything to do with it. The same season the disease cropped out in Glastonbury, on the opposite side of the river, and three miles away from it and from any influence from the soil disturbance in Rocky Hill, Glastonbury has never had any railroad built through or into it, and on the ground of any new soil disturbance as a cause, it ought not to have ague and fever; but, in contradiction of this soil theory, they present it to us just the same. The consideration of these facts leaves the deduction of earth disturbance as the ultimate factor of ague fever in the territory under consideration without a substantial basis of support. It cannot logically be accepted.

The arguments we have applied as against earth disturbance as the etiological factor of malaria in this region, from the construction of roads, will hold as against sewer construction and sewer emanations. The building of sewers involves disturbances of practically the same character as the building of railroads, and offers us no other special points on which to base a theory. As to the emanations from them after they are put to use, as causes for ague, it may be said that when ague is found in every rural town in the valley of the river, miles removed from any possible influence from any sewer or any other like cause, the mere fact that it also prevails in the neighborhood of a sewer in a city of the same valley, gives not even a shadow of proof that the sewer has anything to do with it. Besides which, sewers have been in service in the

city for years before the advent of malarial diseases in this region; they were not less foul in the ten years previous to 1870 than in the ten years since then; and if they have possessed the power to generate malaria in the last decade, why did they not possess it in the decade before? The reasons for this difference must be demonstrated before we can understandingly accept sewer emanations as having any potency in the causation of this group of troubles.

We come now to the consideration more directly of those other supposed factors in the account,—ponds of water, swamps, marshes, and the like, around which ague is said to more generally prevail, and out of which it is supposed to issue. And here we are more especially in a direct examination of the matter of vegetable decay, under uncertain conditions of exposure to heat and moisture, in its relation to our subject. The points previously considered are involved in the general subject of vegetable decomposition, but not in so direct a manner as when seemingly apparent in connection with some pond where the decomposition is constantly going forward, and nothing intervenes against the daily discharge of that hypothetical and undetermined essence of so-called malarial diseases—marsh miasm. There seems to be no doubt that the cause or causes of ague and fever are more powerfully potent along the banks of streams, around the margins of ponds, on the borders of swamps, in low-lying valleys, and the like; that it abides in such places more largely, and exercises there its viciousness with a greater degree of virulence. These facts, always noticed in connection with the epidemic prevalence of the disease, underlie the old theory of marsh miasm from vegetable decomposition, and are the basis of the commonly accepted doctrine of cause. In accord with other observations are those of several of our correspondents. I propose to take some of the most prominent of the spots within the field of our inquiries, where intermittent may be said to be more particularly prevalent, and to examine them in the light of the logic before used.

A conspicuous example of especial prevalence of ague the past few years may be had in the valley of the Mattabessett river, before noticed. This stream, which empties into the Connecticut as the boundary between Middletown and Cromwell, is, for the first four or five miles up, a lazy brook, flowing through flat, alluvial meadows; is interrupted after it reaches the Berlin line by three dams, and by them made more sluggish than naturally. There are several points along it where, taking the theory of vegetable decay and deposit as the cause of intermittent fever to be true, it would reasonably be expected that that disease would be developed. And the intermittent is there, markedly. And if we could have no history of that stream, and of the diseases along it, previously to 1872, the relation between its physical condition and the malaria prevalent, as being cause and effect, would seem to be both apparent and confirmed. But here comes in a great fact that shows the evidence

of relation between them as cause and effect to be utterly worthless, to wit: up to about the year 1872 it cannot be learned that a solitary case of indigenous intermittent was ever developed along the stream. I have talked with people living by it whose memory is good for seventy years back; I am acquainted with men whose ancestors in direct ascent have lived over the same cellar close by it since 1680, and I cannot learn that it had ever been suspected of begetting ague and fever till about 1872. And it is to be remarked that the dams along it, with the ponds, and all the capacities in them for generating malarial diseases, have existed in the same condition for two or three generations at least, and that the only change has been the building of the branch road up the valley, and this was finished at least fifteen years before fever and ague put in its first appearance.

As another example, let us take the pond in Durham, noticed by Dr. Matthewson. It would seem that around this pond, which but a few years ago was materially changed in its capacities for water-stowage and for mischief, ague and fever has largely prevailed. Do not let us lose sight of the fact that it has prevailed there more extensively than in any other spot in the immediate vicinity. The bald fact, considered by itself alone, would argue that the pond is the chief source of trouble. But if we look farther, we find that intermittent first came into Dr. M.'s drive at a place remote from this pond, and on the hills, about 1875; that it worked up a stream that runs north into the Mattabessett, along which last it had prevailed for two or three years previous; that it struck this pond or flooded swamp two or three years later, and has since kept its hold there. If we look still further, we find another pond, a few miles south, in the edge of Guilford, whose water stowage has been increased in much the same way, and the condition been much the same, around which intermittent prevails in like manner; but with this difference; the capacity of the Guilford pond was increased thirty years ago or thereabout, but no ague was developed till more than twenty years after, while around the Durham pond, it came about three years after the flooding. The irresistible deduction from these facts is, that neither of these ponds had any capacity to generate malarial diseases till a new factor had crept in from without.

As a further illustration of this last thought, take the example of a place in the north part of Manchester,—a long, low, half swamp and half meadow spot, crossed at one end by the Hartford and Boston turnpike, which presents the characteristics supposed to be essential to the development of ague, locally known as the "boggy stowe." I am told that malarial diseases have come in in the neighborhood of this spot, but not till within about three years; and yet this place, which I have been acquainted with for forty years past, and which has not been changed in a great many more years than that, never before gave any intimations of its supposed present powers of mischief.

Another example, something like, may be found in the meadows opposite the city of Hartford. It was about this same year of 1872 that ague began here. It has been strikingly prevalent since in that locality. I have had intimate personal knowledge of the place for fifty years; have been through it hundreds of time, and at all hours of the twenty-four; have known scores of people who had lived long lives there. It is no different now from what it has been for the last two generations. It is flooded nearly every spring by the rise in the river; but the flood is not different from what it has always been, nor is the deposit which the flood leaves any different. But up to about 1872 a home-brewed case of fever and ague was not known to have ever existed in the locality.

I come now to my own drive. With the exception of a solitary case fifteen years before, I had not been able, after diligent inquiry of people seventy-five years resident of the town, to learn that any native cases of intermittent had occurred till 1872. Several well marked and typical cases came that year, and every season since we have been able to give as good a showing in malaria as any town on the river. But we have no flooded swamps, we have no sewers, we dig no new cellars, we upturn no new earth, we drink no reservoir water, our streams have been no drier than before, we have no different meadow deposit, we import no manure, we have no more vegetable decomposition; we have absolutely *nothing* out of which intermittent and the allied diseases can be extracted, that we had not had for the hundred years previous to its settlement with us in 1872. I challenge the most scrutinizing sanitary engineer, or the most inquisitive of health boards, to explore the township, and find anything on which to base a theory of local cause for the prevalence of intermittent, that the logic of facts will not demonstrate to be utterly indefensible.

And what are our facts? It appears that into the territory we have been examining, through all of which for very many years previous to about 1872, indigenous intermittent and other so-called malarial disorders had no heritage, save in a very few scattered instances, as the advanced guards of an invading host, there rather suddenly came some mysterious potency that made those disorders very prevalent. The relations of our correspondents seem to show that the part of the valley first generally affected was that from Hartford to the straits at Middletown, extending back from the river west to Berlin and New Britain. Next in order of time came the towns below the straits to the sound, and then, the towns above Hartford to the state line, and eastward from the river. But the general advent of this class of troubles into the territory we are examining is so nearly related in point of time as to constitute it a simultaneous wave. Another fact is, that, taking this territory as a whole, there did not occur at this time any such upturn or change in its physical features, either by the addition of the one more line of

railroad through it, or by the addition of ponded water, or by new carriage roads, or by sewers, or any other tangible thing, as would produce any such outbreak over such an extent of country. There was no more of this sort of upturn and addition going on in the years from 1868 to 1872—there has been no more going on in the years since the last mentioned—than there had been in the ten, or the twenty, or the thirty years previous to the first mentioned date; during which last alluded to, all disturbances occurring in them were utterly impotent to beget so-called miasmatic diseases.

The facts gathered and presented, and the irresistible logic that follows from the examination of the facts, justifies these conclusions. That undetermined and hypothetical factor, which, for want of a more appropriate name, we call malaria, is not dependent for its existence upon marshes, or ponds, or earth disturbance, or sewer filth, or vegetable decomposition, or any other the like thing; it presents itself independently of, away from, and beyond the influence of them; it thrusts itself into notice where they are not, and is for years wanting where they are; and further—they are none of them competent for its development until they have been impregnated with some force or principle from without. And this impregnation, and the power of development afterward, is matter of doubt. It is quite true that in the neighborhood of certain ponds, and around particular marshes, this factor is more active and virulent; but whether it ever at all emanates from them, or simply finds about them a more congenial dwelling place, may be questioned. But allowing that it emanates from them—that it is bred there and issues forth—there still remains the necessity that first the exact thing, the essential factor, the specific cause, of intermittent be lodged there from without. The foulest swamp in the valley is as incompetent to produce the poison of intermittent fever till it has been fructified by some other agency, as the trout brook reservoirs are to produce carp until they have been first stocked with carp or with the fecundated eggs of them. And as after the last carp cultivated in the pond has been fished out, there will be no more in it until it is stocked again, so also, when the last malarial germ has been eliminated from our valley,—as it will be after a few years,—we shall have no more intermittent until again the original force is returned to us. The river is not the father of the fish,—it is simply the home of it; the fish is bred *within* but not *from* it; it is begotten there by its ancestor of the same type, and only of that ancestor. The river may exist from eternal; but so far as we know anything of the sequence of order in nature, it is utterly impotent for the generation of a single scale until the primordial antetype of that scale has been implanted within it. So also the marsh is not the parent of what we call the paludal poison; it is a home where it abides in a greater abundance, though not its only nor its necessary home; it is a place where it more closely congregates, and in which it is probably

more prolifically multiplied; but of itself, howsoever foul it may be from vegetable decomposition and the debris of years, it is incompetent for the production of a single particle of the especial essence that induces the phenomena of intermittent fever, until that especial essence has first been engrafted into it. This postulate may seem like dogmatism; but it is a logical corollary from the facts which the invasion of our territory by ague and fever fully justifies, and which it seems impossible reasonably to avoid. The "doctrine that intermittent is due to vegetable decomposition," says Dr. Lyon, "is destined to suffer modification." I will add to this—that doctrine, in the sense in which it has obtained, is not defensible before the facts; it is a fallacious deduction from coincident conditions, and only fallacious.

I have dwelt upon this point, as one of the especial features of this paper, for the purpose of illustrating the tendency we all have to draw our inferences from coincident conditions without thoroughly enough probing them. Exacting science is not satisfied with resting upon the presumption that because a certain disease is found, in no matter how many instances, in contiguity with certain assumed vicious conditions, that the conditions stand in the relation of cause; and especially it is not satisfied if it at the same time appears that the same disease, in a not less pronounced and vigorous activity, is prevalent in other places where the same or any other like vicious conditions do not exist. The latter fact destroys the validity of the evidence deduced from the presumption arising from the proximity of the other facts. Allow me to make my meaning more clear by an illustration from another matter. It is a subject of common observation—it is especially alluded to by several of our correspondents—Drs. Brandegee, Sauford, Mather and others—that there has been in the last few years, in many parts of the territory we are examining, and perhaps in all of them, a marked diminution in the number of cases of typhus and typhoid fevers,—autumnal fevers, they have been sometimes called; continued fevers, Dr. Watson calls them. Several years ago our attention was called to the fact that as intermittent came in the continued fevers went out. Whether or not there is any relation between this income of the one type and the outgo of the other, it is not our present purpose to inquire about. What I wish to notice is, that about the time typhoid began to be less prevalent in Hartford, there also began to be a very great deal less of use of the old wells, and a substitution of the use of river water; the wells having been almost entirely abandoned. And I very distinctly remember having been told by members of the profession in the city, that the diminution of typhoid was due to the fact of a change from the old well to the river for drinking water. Now this is one of those conditions apparently real, but in reality only apparent. The untenableness of the supposition is shown by the fact that not in the city alone about this time, but in the rural towns of the valley, where the people continued, and still con-

tinue, to use their old wells just the same, the diminution—the almost utter absence in some places—of the continued fevers, of the varied types, was not less striking; which shows that not the substitution of one sort of drinking water for another, but some influence beyond that, affecting rural and urban localities alike, has wrought the change. This relation will aid us in seeing that it is necessary, if we desire the bottom facts as a substantial basis of theories, that we must not be satisfied with deductions from the bare coincidences of time and place. And especially so, if we consider that the present tendency of a considerable part of the professional mind, influenced by an epidemic prevalent in the professional press, is determined towards the point of discovering in some local surrounding the prime cause of not only such epidemics of disease as the one we have been considering, but of every sporadic case as well. The sanitary engineer is abroad; the health board is in a lively activity; we are gravely told that our sicknesses are the outcomes of local faults; that the assurances of our health are in the corrections of our dwellings, our sink drains, and our sewers; in the removal of our cess-pools, the abandonment of our wells, the abolition of our dung-heaps, the drainage of our swamps, and the burial of our rotten turnips. Men in high places gravely tell us that the business of the coming physician will be not to cure diseases but to prevent them, in the expectation that they are to be stamped out by some scientific endeavor. But if this is to be applied to the extinguishment of intermittent, it will miserably fail, for the reason that it does not reach down to the *primum mobile* of the disturbance. Ultimately it will disappear from the locality (as our correspondents predict—Drs. Ely, Rockwell, Lyon, Warner, Turner, and others), but not because of our sanitary war against it. Silently, but not suddenly, it will be gone; and about that apparently pestiferous marsh where the past season there were a hundred cases, no amount of the most careless exposure will develop you a solitary straggler. You will build new railroads, put down new sewers, lay out more streets, construct other ponds or drain off the old ones, change your swamps or leave them as they are;—all the same, your utmost endeavor will not yield a single shake. But in the place of it there will return to you again the old forms of continued fevers, modified perhaps, but still continued; the evidence for which is already apparent in the mixed and irregular manifestations in place of the typical intermittent, with a tendency backward to the former prevalent forms.

If it is asked—What then is the essential factor in intermittent fever? the reply must be,—I do not know. The object of my paper is not to advertise a theory of cause, but to show the worthlessness of the most commonly received theory, put forward especially by Lancisi. That theory is erroneous, and ought to be abandoned. The abandonment of error is the first step in progress; who is satisfied with the old is little likely to exert himself for the new. The elimination of the erroneous

from the account by so much narrows the ground over which the explorer is to search; and so papers like this may have some possible value. Dr. Russell, in a letter referring to an article of mine on this subject in the Philadelphia Clinical News of January 8th of this year, suggests the idea of cause as a fungus, like that which produces the "yellows" in peach trees and similar diseases in other fruits. Recently in Italy, some investigations have been made co-ordinately upon the human body and upon the soil of malarial regions; and it is published as the result that certain bacteria—the *bacillus malarie*, they call it—are found in the liver and spleen of subjects deceased directly after attacks of ague; and that the same species of bacteria are found in the soil of malarial sections, like the Pontine marshes, and can be propagated in that soil. The conclusion of course is that the bacteria get out of the soil into the human system, and produce there the phenomena of intermittent. This is something in accord with the idea of Dr. Russell. Experiments in this direction are too immature to prove the virtue of the idea; though it would explain that faculty of emigration and diffusion which has been manifested in the Connecticut valley in connection with these malarial disorders. It would explain also why it is that without physical change in a given territory the disease disappears, after a season of prevalence,—the bacteria for some reason dying entirely out; and it would account for some developments connected with ague which the theory of decomposition does not explain. But a cautious enquirer will abide a while longer in his uncertainties, before taking stock in a new etiological doctrine that further examination may prove to be as untenable as the old.

ROCKY HILL, Conn., April, 1881.

LITCHFIELD COUNTY.

To the Litchfield County Medical Society.

GENTLEMEN: In response to your request I herewith submit a report of the cases of Dysentery that occurred in Washington during the summer of 1879.

I am glad to make this report as I wish to call your attention to a cause of disease, which has I fear received too little attention from the profession.

The town of Washington presents the usual topographical features of Litchfield county, with perhaps less stagnant water and swamp-land than most of the other towns. It had been entirely free from epidemics for two or three years previous to 1879. During the spring and early summer of that year, no more than the usual number of sporadic cases of Dysentery and gastro-intestinal troubles had occurred. The whole of the eastern parish is, and has been, entirely free from malaria. The residence of Mr. O. H—— is situated in the southeasterly part of the town, on the eastern slope of a hill, about 600 feet above the level of the Shepaug River, and about two miles from it. At the rear of the house the ground gradually rises to the crest of a hill about one-half of a mile distant; in front it descends quite abruptly about twenty rods to a small stream, which winds around the base of the hill, on which the house is situated. On the opposite side of this stream the ground rises about 300 feet to the mile for a distance of nearly one and one-half miles; on both the land is cultivated to the summits of the hills. A public highway runs directly in front of, and about ten feet from the house, crossing the stream at the foot of the hill, near to the ice-pond. Diagonally across this highway from the house are situated the barns, stables, and other farm buildings.

The family of Mr. H—— consisted of himself, his wife, his wife's mother, aged 65, a son aged 12, a daughter aged 9 years, and a female domestic. Previous to August 6, 1879, the family had enjoyed almost uninterrupted good health. On that day I was called to attend the son. I found him suffering from what appeared to be a mild attack of dysentery.

Although the evacuations of blood and mucous were frequent, and the tenesmus great, neither the pulse or temperature were much increased. There was neither nausea or vomiting, but the patient complained of constant thirst. Thinking the attack pro-

duced by some irregularity in diet I prescribed Ole. Ricini, its operation to be followed by Subnit. Bismuth and Opium, if the evacuations continued. The next morning I learned that the oil had operated freely, and that the Opium and Bismuth were being given, but without any alleviation of the symptoms. I ordered the continuance of the treatment, and in addition injection of starch and laudanum. In the afternoon of the same day I was called to see Mr. H——. I found his symptoms closely resembling those of his son, with the father as with the son, the attack had been preceded two or three days by a diarrhœa, but the dejections were not as frequent, they were however more copious, and of a serous character, resembling beef brine. On the 13th the daughter was attacked with a severe chill, which was followed by a frequent pulse, a temperature of 105°, and constant nausea and vomiting. The evacuations were frequent and made up of blood and mucous. The tenesmus was severe and incessant.

On the 20th of the month the grandmother was attacked with symptoms closely resembling those of the daughter; with the father and son the symptoms were from the first decidedly asthenic, with the grandmother and daughter as decidedly of a sthenic type.

The son died on the 9th, the daughter on the 3d, and the grandmother on the 5th day of the disease. The father began to improve about the end of the third week of his disease and slowly recovered.

Drs. Deming, Gates, and Lyman were called in consultation.

Dr. Crane, President of, and Dr. Raymond, Inspector for, the Brooklyn Board of Health, rendered valuable assistance in investigating the sanitary surroundings of the family.

I will not attempt to give the treatment, but believe that every remedy, that seemed either to my colleagues or myself adapted to the cases, was faithfully tried but nothing appeared, in the least degree, to affect the disease.

Mrs. H—— and the domestic both had severe diarrhœa, but without dysenteric symptoms.

A brother of Mr. H., after spending a day or two at the house, was attacked with dysentery, he returned to his home and recovered in about ten days. A sister of Mrs. H. after aiding three or four days in caring for the sick returned to her home with symptoms, which developed into a violent attack of dysentery. For a time her case seemed almost hopeless, but she finally recovered.

She had four children which I caused to be removed from their

home the next day after the return of their mother. Of these children the two youngest who were with their mother the most of the time before their removal, were carried in nearly opposite directions, one being removed about two miles and the other more than a mile from their home. On the fifth day after their removal both were attacked with dysentery, but the disease was of a mild type and both recovered. The other children who had been but little with their mother escaped. A farm laborer residing about five miles distant worked two or three days on the farm of Mr. H. during the sickness, boarding and lodging in the house. The fourth day after his return to his home he was attacked with dysentery. A neighbor who was with him one or two days, was attacked with the disease; both cases soon recovered. No other cases occurred in the parish. Every possible precaution was taken to prevent the spread of the disease.

Of course the cause of the sickness was earnestly sought for. That it had its origin in purely local causes, could not be doubted. Yet everything about the premises indicated as favorable, and even better, hygienic conditions than existed about most farm-houses. The water and food were carefully examined, but no disease producing elements were found in them.

The drinking water was obtained through a lead pipe from a spring about thirty yards from the house. A careful examination of it and its surroundings showed it to be entirely free from contamination, and a careful chemical analysis made by Dr. Raymond of it, as received in the house, proved it to be practically pure. Dr. R. says, "I will venture to say, that nowhere in your state can better water be found." The cellar was found to be damp in consequence of the water coming through the rear wall during heavy rains, but not more so than it had always been. It was entirely free from the decomposing vegetables that too often contaminate the cellars of farm-houses. There was some soil saturation around the house caused by an overflow of the water brought into it, but not more than had been during past years.

In fact the sanitary surroundings to all appearance were the same as in previous years when the family had enjoyed almost complete immunity from sickness. A careful examination however finally disclosed one change, it was this.

During the previous year a dam had been built across the little stream at the foot of the hill for the purpose of making a pond from which ice could be procured during the winter. The ice had

been procured from this pond and stored for use. Upon inquiry I learned that it had been the custom to put a large piece of this ice into a pail in the morning, then fill the pail with water, of which the family would drink until the supply became exhausted, when more ice would be added without the water, thus making nearly all the water consumed that produced by the melted ice. I ascertained these facts early and advised that no more ice should be used in this manner.

My advice was followed, but too late to prevent the mischief. While I did not more than half believe that the ice could be the cause of the sickness, having without examination accepted the theory that freezing purified water, I was induced to prohibit such use as the family were making of it because it was the only new factor that entered into their sanitary surroundings.

The stream from which the ice was taken has its rise in springs a little more than a mile above the pond of Mr. H. It is comparatively sluggish, having a fall of less than fifty feet to the mile. But two houses are located near the stream above that of Mr. H.

From the house in the diagram and the out-buildings adjoining it is hardly possible for the drainage to reach the stream.

From the house and out-buildings the drainage reaches the stream below the dam. From the house of Mr. H. the drainage flows directly into the stream and pond from which the ice used by the family of Mr. H. was taken. This pond also receives the washings from a hog-yard in which hogs had been kept for fifteen years.

The ice that had been taken from the pond above the dam had been used as freely and in much the same manner by the family living near as that taken from the pond, by the family of Mr. H., but without any injurious effect. It was evident then that if the ice taken from this stream produced the disease, it must have become contaminated below the dam. That this was the fact was probable from the large amount of surface drainage poured into the stream below that point. An analysis of the ice used by the family of Mr. H. made by Dr. Raymond, gave the following results:

Free Ammonia, parts per million,	-	.08
Albuminoid, " " "	.	.09

Water greenish in color with light colored particles organic in origin in suspension. Dr. R. adds "a very bad drinking water, sufficiently so to be the cause of the disease."

This analysis, the circumstances of the case, together with the

exceptional absence of all other disease-producing causes, force me to the conclusion that the first four cases here reported were caused by the drinking of melted ice, and that the disease thus caused developed an element of infection that produced the other cases.

During the past two years I have closely observed the streams and ponds from which ice is taken, and have found the surroundings of a large proportion exceedingly filthy. Many of the ponds are raised on small streams into which flow the washings of the hills and farm-yards, also the sewage from houses situated near. It is not unusual to find privies erected over these streams, but a short distance above the ponds. It is true that some of this filth will settle to the bottom, but this cannot happen when the streams are frozen over in the early winter, when it is deposited on the ice, to be washed down with the surface drainage from the hills during the first warm day or light rain fall, and spread over the surface of the pond, where it will be frozen the next cold night, and incorporated with the ice that is stored for use.

As it has been proved by frequent experiments that freezing will not always destroy the vitality of disease-producing germs, it is clearly our duty to warn the community against the drinking of water produced by melted ice. If water must be cooled let it be done by applying the ice to the outside of the vessel containing it.

NEW LONDON COUNTY.

TREATMENT OF TYPHOID FEVER.

DR. PECK, NORWICH TOWN.

The subject which I have chosen for the present paper, namely, The Treatment of Typhoid Fever, while it possesses none of the charm of novelty, yet from its importance must ever be one of interest.

There being no specific treatment, no routine to be pursued in every case; and since symptoms and complications present themselves in endless variety, requiring treatment to be daily, if not hourly adjusted to each case, no definite plan can be given, which will be applicable to even a small number of cases: therefore I shall undertake some general considerations, and afterwards direct attention to symptoms and complications.

To the question, can typhoid fever be aborted, or materially cut short in its course, I suppose many physicians would answer, No. Yet there is eminent authority for a contrary opinion.

T. K. Chambers, of London, reports a number of cases, in which it would seem to be certain that this disease was aborted. He believes the disease to be usually, if not always, introduced into the system through the mucous membrane of the alimentary canal; notably through the stomach, since this is the first organ to resent the poison, as shown by the early nausea and vomiting; and that a strong emetic may dislodge a portion of the poison adherent to the mucous membrane, which SURPLUS of poison is supposed to be necessary to the full development of the disease; thus he aborts typhoid fever, by getting rid of the excess of poison.

In his opinion, an emetic, preferably ipecac, given during the first four days, and possibly during the first week, will sometimes abort and usually lessen the severity of the fever.

Hudson, in his lectures, published in this country in 1869, gives much additional testimony to the efficacy of emetics, though he limits their usefulness to the first twenty-four to thirty-six hours. He acknowledges the uncertainty attending the diagnosis of typhoid fever, during the first two days; but holds that the evidence in favor of emetics greatly preponderates.

These two authors agree as to the effects of emetics; differing only in their opinions of their modus operandi. It is but fair to

state that other eminent authors, Niemeyer among them, have failed to abort typhoid fever with emetics.

After having given the emetic, Hudson endeavors, by means of antimony and nitre. q. 4 h., to induce copious diaphoresis, and to keep it up for twenty-four hours; but if the disease be once thoroughly established he condemns all emetics, diaphoretics, and also cathartics, beyond the unloading of the bowels with some mild purgative. Niemeyer believes that emetics even produce an unfavorable effect on the course of the disease.

Can the course of typhoid fever be shortened?

Liebermeister and Niemeyer think it can. Niemeyer says that one or two five grain doses of calomel may sometimes shorten it, and often favorably modify it. Both authors recommend the use of iodine as follows:

℞.	
Iodine,	gr. vi.
Pot. Iodid,	gr. xii.
Aquae,	3 i.
M. et Sig. gtt. 3-4 q. 2 h.	

Liebermeister, whenever he sees a patient during the first nine days, begins the treatment by giving 10 gr. of calomel, and afterwards $7\frac{1}{2}$ gr. doses, so that the patient receives 32 gr. during first twenty-four hours.

On comparing 200 cases thus treated with a still larger number treated without it, he found the mortality less: and now, having continued its use in over 800 cases, he still urges a trial of it by others.

This plan was advocated by Sauer, in 1840; by Magendy, in 1859, and by Willebrand, in 1866.

Liebermeister compares the results of treatment of 839 cases, all being treated exactly alike, except that 223 received calomel; 239 received iodine; and 377 received neither; the rate of mortality in the three classes of cases was as follows: with neither drug, 18.3 per cent.; with iodine, 14.6 per cent.; and with calomel, 11.7 per cent.

As soon as the diagnosis is established, the surroundings should be carefully arranged, if possible. The room should be large, airy, and through ventilation provided for. One author states that, in a large number of cases, the lowest death rate was among those treated in tents, where the air blew in day and night.

Hair mattresses and pillows are desirable. Bed linen should be

changed and patient bathed every day. The ease and comfort of the patient, especially in warm weather, may be greatly enhanced by a simple contrivance which I have had made lately, for an old lady, who broke her hip, and could not be handled.

Take two pieces of second-hand gas-pipe, about one and a half inches in diameter, and six feet nine inches long. Plane a pine stick round, and drive through the whole length of the pipe. Let a blacksmith drill small holes through one side of the pipe, once in four inches; then put in screws into the wood, and let the heads remain without the pipe, about one-quarter of an inch. At one end of each rod, drill a half inch hole through opposite sides of the pipe, and put through these holes a piece of round half inch iron rod, fourteen inches long. To prevent its coming out, rivet it, and bend the other end, making a handle to the crank five inches long. Get a solid old-fashioned bedstead, with turned posts; lay the gas pipes into some one of the fancy places in the posts, and drive staples over the pipes, to keep them from rolling out. Now take strips of stout cotton cloth, eight inches wide, and two feet longer than would reach from one rod to the center of the bed, and thence to the other rod; fold down each end of the strips two inches, and stitch with a machine; stitch again, close to the end, so that there is barely room to slip in a stout wire, just as a curtain stick is slipped into the lower end of a curtain; now make two button-holes in each end of the strips, four inches apart, and close to the wire. The wire is to keep the button-holes from tearing out. Now bore two holes in the posts at the foot of the bed, and put in wooden pegs, to keep the cranks from turning; slip the rods through the staples; button the strips on to the screw heads, and the machine is done. The whole expense was \$4.50. We found it necessary to make the strip which came under the buttocks, back, and shoulders very wide, else it drew up into cords.

With this, with the greatest ease, a patient may be raised up and left to swing in the air, while the bed is changed, and has a chance to cool or a bed-pan placed in position. By unwinding one side, while the other is wound, the patient is carried gently across the bed and lowered on the other side. The upper ends of the gas-pipes may be slipped out of the staples and lowered, thus giving free access to the patient.

All company, noise, bustle, or fussiness of attendants or friends should be excluded. The temperature of the room should range

from 60° to 65°. Bed-clothes should be light. It is important to change the position of the patient, frequently, to prevent hypostatic congestion; it is also well to instruct the patient to do this for himself, so long as he is rational.

Concerning sleep, so important as a restorative, and so difficult at times to obtain, it should be remembered that it is natural to sleep at night, and to wake by day; therefore do not encourage it by day, but push aside the curtains, admit light freely, only shielding the eyes from direct rays. At night let the room be cool, and the covering light. Too often the friends will close every door and window, and pile the clothes on to the patient; the sure result is restlessness and sleeplessness. Food or medicine should not, save in exceptional cases, be offered more frequently than once in four hours.

In addition, we may bathe the head in warm or cold water. If headache and restlessness are severe, a few leeches to the temples, or behind the ears, or a blister to the nape of the neck will probably be followed by sleep.

Graves recommends for sleeplessness and delirium the combination of opium, with tartar emetic; the latter in doses of from $\frac{1}{16}$ gr. to $\frac{1}{8}$ gr., q. 1 h., unless it cause nausea. Bromide and chloral; also Tr. Digitalis M. 30, q. 1 h. for several hours, have been used with good results.

Occasionally the patient fails to pass water, or to give notice of desire to do so; this should be a subject of daily inquiry, and if necessary a catheter passed twice or thrice a day.

FEVER.

Liebermeister asserts that the chief element of danger in typhoid fever is the prolonged high temperature, which results in paralysis of the heart, paralysis of the brain, and disturbance of other organs.

For this hyperpyrexia there are two causes: increased production and decreased élimination of heat; I believe that heretofore too much stress has been laid upon the *increase*, and too little upon the non-elimination of heat. That production of heat is augmented is proven by the facts that the body wastes away so rapidly; and that analysis of the excreta show increased tissue metamorphosis.

Let me refer to experiments by Drs. G. L. Walton and C. B. Witherle, reported in *The Boston Medical and Surgical Journal*, of June 10, 1880, entitled, "The Etiology of Fever."

These experiments were undertaken to decide, if possible, the disputed point, as to whether fever were due to increased production or decreased elimination of heat. Liebermeister placed a man in a bath of the exact temperature of the body, the temperature then rose 1° , and never any more, however long the bath was continued; under these circumstances, the heat of the body being absolutely shut in, it was claimed that absence of elimination could never account for a rise of more than 1° ; but this point was overlooked, that when the body temperature had risen 1° , elimination of heat began at once.

Drs. Walton and Witherle experimented thus. when the temperature of the body had risen 1° , the temperature of the bath was also raised 1° ; as often as this was done, the temperature of the body rose. The experimenter was perfectly well on entering the bath, but on emerging, after the first experiment, the pulse was 160, temperature 103.2. There was "Flushed face, dry mouth, headache, and at times nausea."

In the second experiment $2\frac{1}{2}$ lbs of flesh were lost; and examination of the urine showed 25 per cent. increase of urea.

These experiments show conclusively that non-elimination of heat is at least *able* to cause fever-heat.

I think an illustration of the truth of this theory may be seen in an attack of chills and fever. The onset begins with spasm of the superficial arterioles, effectually checking peripheral circulation and perspiration, and hence elimination; temperature rapidly rises several degrees, to as rapidly fall, as soon as superficial circulation and perspiration are restored.

In combatting the high temperature, we try to meet these two indications. Whether we can really prevent the production of heat, at any given time, as by large doses of quinine; or limit the time during which heat is produced, as by giving calomel, iodine, etc., may be a matter of doubt; and *if* possible, the known means of accomplishing that object are few and uncertain; the plans for increasing elimination (or abstracting heat) are more abundant and certain.

The sweat glands, through the perspiration, constitute the great regulator of body temperature; if they be in perfect order no amount of muscular exercise, in a *dry* atmosphere, can raise the heat of the body 1° . During fever the sweat glands are inactive; the skin is hot and dry; the capillaries are congested; the circulation is stagnant; hence there can be little, if any, evaporation from

the surface. In this condition, thorough oiling of the skin, with friction, docs good; the oil, penetrating the pores, renders the skin soft and pliable; and the rubbing, by removing, temporarily, the congestion, restores the circulation and perspiration. Olive oil may be used, and perfumed with two or three drops of some fragrant oil. This means is strongly recommended by Prof. Thompson, of N. Y., not only in typhoid fever, but in all fevers. At the same time, plenty of drinks should be administered, even to urging them upon the patient; for occasionally, especially in the latter stages, water will be swallowed, if put to the lips in a spoon, when it will not be called for; this may be required q. $\frac{1}{2}$ h. It should not be forgotten that large amounts of water pass off by the bowels (particularly if there be diarrhœa), by the kidneys, by the lungs, and by the skin. To maintain the secretions as nearly as possible at the normal, and to keep the blood in a condition to circulate freely, a generous supply of water is indispensable.

Perspiration may be encouraged by certain drugs, as nitre, antimony, etc.

If elimination of heat by sweating fail, we find substitutes in cold baths, wet packs, and spongings.

The most efficacious of these is the bath. By this means, as often as the temperature reaches 103° , or $103\frac{1}{2}^{\circ}$, it may be reduced 1° , 2° , or 3° ; but let no one suppose that two, four, or a dozen baths, will be sufficient, if the case be at all severe: on the contrary, from four to eight or twelve a day for several days will be required.

Niemeyer claims to have been the first to use cold baths, in typhoid fever; but becoming alarmed at the prostration which some times followed their use, he gladly adopted the plan suggested by Ziemssen: namely, to place the patient in a bath 10° lower than the temperature of the body; afterwards, by adding cold water, gradually to reduce the bath to 68° or 70° . If the patient be depressed by the bath, stimulants must be administered after it; and exceptionally, before also.

The duration of a bath should not exceed 10 or 15 minutes. Fat people require to be left in a bath longer than lean people: duration of bath for children should be less than for adults.

The objections to the bath are, that they involve a large amount of labor for the attendants, and considerable disturbance and exhaustion for the patient. The unavoidable exertion by the patient might cause perforation; and Liebermeister states that the

sudden determination of blood from the surface to the center, does sometimes lead to intestinal hemorrhage; in which case the baths must be immediately discontinued; the slight danger from depression; and popular prejudice. Liebermeister states that great weakness of the heart, as shown by cool, livid surface, while the interior is hot, is a contra-indication for baths; not so however, with pneumonia and hypostatic congestion, which often improve during their continuance.

The wet pack is accomplished by placing a rubber cloth on the bed; laying over it a sheet, wet with cold water; rolling the patient in the sheet, and covering with bed clothes; the sheet to be now and then sprinkled with water; by this means the temperature may be reduced, though not so surely as by the bath.

Sponging the patient with cold or tepid water, to which a little vinegar or alcohol may with advantage be added, should not be neglected, if more powerful means are contra-indicated.

The rapid evaporation of water from the hot skin, must necessarily cool the body considerably. This is so gentle, and so agreeable to the patient, that if the clothes be thrown back to favor evaporation, and the sponging be persisted in, it becomes an important means of combatting excessive fever.

I have treated one patient almost exclusively with milk, eggs, whiskey, and baths; when the axillary temperature reached $103\frac{1}{2}^{\circ}$, he was given a bath: many times he had a regular chill before the bath; his teeth chattered, and he declared that he was freezing; but after being in the bath a few moments, he became warm, subjectively speaking. Thirty baths in all, were given, and the patient made a perfect recovery.

Niemeyer and Liebermeister assert that if quinine be used in connection with baths, the fever heat may be kept within safe limits with less trouble, say four baths daily. Niemeyer gives gr. ii-iv tid; but Liebermeister insists that when quinine is given, gr. xxii-xlv be taken within an hour; after this, he gives no more for one or two days, and thinks it better to administer it at night rather than in the morning.

Quinine is especially valuable when baths are inadmissible.

If it occasion vomiting as it frequently does, nearly as good results may be obtained by injecting it, with laudanum, into the rectum.

Hagenbach regulates the dose for children thus: under 2 years, gr. 10-15; 2-5 years, gr. 15; 5-10 years, gr. 15-23; 10-15 years,

gr. 23-31; and adds, that not much good can be expected from less.

If the case be severe, and quinine fail to lower the temperature, Liebermeister gives Pulv. Digitalis, gr. 11-22, during 36 hours, and follows that with a full dose of quinine.

He claims that it should not be used, when the pulse is weak or rapid: as it does not prevent paralysis of the heart, but sometimes favors it: he gives no reason for the statement.

When quinine and digitalis failed (which was rare) to reduce temperature, he has succeeded with veratria, pressed q. 2, h. until nausea or vomiting occurred.

For paralysis of the heart, he states, that while, from general principles, we would expect good from the use of digitalis, yet such is not the fact. An ice bag to the region of the heart, quinine, and alcoholics are our main stays.

DIARRHOEA

To the extent of 2 or 3 passages daily, during the first stages, may be beneficial: Hudson and Reynolds so regard it. Hudson considers that some of the typhoid poison may be carried off in this way. If it be *severe* it must be checked, if possible. Chambers states that with the use of hydrochloric acid, diarrhœa of any severity, is rare: but if it fail, he recommends a Dover's powder.

When there is pain in r. iliac fossa, with tenesmus, leeches may be applied at the seat of pain, and poultices placed over the iliac region. Most authors advise the use of the styptic salts of silver, copper, and lead: and the vegetable astringents, tannic and gallic acids.

Hudson prefers oil of turpentine. If the stools contain shreddy masses of sloughing mucous membrane, with a fœtid odor, he used the bisulphite of soda or magnesia.

Occasionally the bowels are slow: or the tympanites is so great as to disturb the patient, and embarrass respiration; this should be relieved by means of enemata, to which may be added turpentine, or assafoetida: turpentine stupes, and compression of the abdomen, by means of bandages, are useful: we may also pass a stomach tube, or a large gum elastic catheter into the rectum, as far as possible. Leeches to the anus relieve intestinal congestion. If there be rectal tenesmus, starch and laudanum injections are efficacious. I have also found this a good way in which to administer opiates in diarrhœa.

HEMORRHAGE.

If this occur, we must check it, if possible, and support the strength.

Reynolds regards slight oozing from the mucous membrane of the intestines as beneficial: but for hemorrhage he places ice on the r. iliac fossa and gives internally, the astringents recommended for diarrhœa; or the perchloride of iron. Ergot is not to be forgotten; at the same time, enemata should be given, containing lead, tannin, or turpentine. The strength must be kept up by stimulants, and opium, freely administered, with milk, or beef essence.

Restlessness is dangerous, in latter stages, and does certainly occasionally result in hemorrhage, or perforation.

In both of these accidents, opium is our sheet anchor: it is also equally valuable as a preventive.

If the patient shows signs of sinking, Reynolds recommends turpentine, in doses of from M. 10-15 q $\frac{1}{2}$ -1. h. If the hemorrhage is slight, with much arterial excitement, he gives ℞. Tr. digitalis, m. xv. Tr. ferri chlor. m. xxx. Aq. menth. pip. ʒss. q. 4, h. If these fail he injects the following. ℞. Plumb. acetat. gr. x. acid acetic. M. x. morph acetat, gr. ss. aq. Tipidæ ʒ iv: or, ℞. Liq. Ferri Perchlorid. M. xv.

Morph acetat, gr. ss. aq. ʒ iv.

Fatal peritonitis usually follows perforation; if it be limited, and the patient be kept well under the influence of opium, recovery may be possible; but during convalescence, careful regulation of the quantity and quality of the food is absolutely necessary; as is an avoidance of all cathartics for many days. Any indiscretion in eating may cause vomiting, diarrhœa, or the perforation of an unhealed ulcer.

In epistaxis, if astringents do not check it almost immediately, tampon without delay.

PNEUMONIA,

Always a serious disease, is especially serious, as a complication of typhoid fever. Hypostatic congestion occasionally merges into pneumonia. This should be met with dry cups; rubefacients, such as turpentine or blisters; and the best of supportive measures, including carbonate of ammonia, quinine, whiskey punch, etc. Authorities differ as to the advisability of using cold baths,

spongings, etc. Liebermeister recommends both. Chambers urges the application of a poultice jacket.

Hudson speaks of suffocating bronchitis, being the prevailing complication, during certain seasons, which is apt to be fatal. He advises the use of decoction of senega, with carbonate of ammonia; boluses of camphor: oil of turpentine, in doses of from ʒi.—ʒii: and in desperate cases, Tr. cantharides, 30 to 40 drops, combined with turpentine. At the same time, he stimulates the patient externally, in every way possible: by sinapism, and blisters, especially flying blisters. In one instance, where the patient was fast sinking into a coma, which in these cases was always fatal, he aroused the patient by pouring hot water over the legs: the patient was roused, and recovered, having only superficial sores, which quickly healed.

BED SORES

Are a source of great discomfort and of some danger. To prevent them, scrupulous cleanliness, with dry bed-clothes, are necessary. If the skin looks at all red, it may be painted with lead-water, brandy, alcohol and water, lead-water, a solution of tannin, or callodion; the part should be relieved from pressure by a water-bed or an air-cushion, with change of position as often as practicable. If the skin be broken, cover with ointment of lead, zinc, or tannin; it may also be touched with nitrate of silver. If there be a slough, cover with a linseed poultice, upon which is sprinkled ground cinchona bark. If the edges look livid or unhealthy, touch with nitrate of silver, or paint with tr. benzoine.

FOOD

Is to be given in as large quantities as can be digested; more than that is a source of irritation. Milk is, probably, the best article of diet for fever patients; eggs are also good; but, as Chambers remarks, if they do not digest they are decidedly injurious, because of the sulphuretted hydrogen and ammonia which they give off. It is better to beat the eggs with milk, and to add to each allowance a few grains of pepsin or lactopeptin.

Richardson has shown that there is an increase of ammonia in the blood in typhoid fever; and that it is best neutralized by the use of hydrochloric acid, say M. ʒ0, in syrup and water, q. ʒ2—4 h. Hydrochloric acid is probably better than any other acid; for, being a natural constituent of so many of the tissues and juices of

the body, it may almost be called a food. It cleans the tongue and probably the mucous membrane of the small intestine, and prepares them to digest food.

Flint recommends the use of dilute sulphuric acid; and reports a series of experiments at Bellevue Hospital in which, without it, the death rate was twenty per cent.; with it, only a fraction over nine per cent.

Chambers also reports a similar series, in which, by the use of hydrochloric acid, the death rate was reduced from $19\frac{1}{2}$ to $2\frac{1}{2}$ per cent.

Aromatic sulphuric acid with syrup makes a drink generally agreeable to the patient.

ALCOHOL

Is indicated whenever there is marked prostration; delirium of a low, muttering kind; tremulous state of the muscles and quivering of the hands; when the pulse is weak and irregular give without stint.

If the patient has been addicted to the use of alcohol, it is best to give some stimulants during the whole course of the disease; otherwise it is better to reserve them against the sinking in the last stages. Liebermeister uses, besides alcoholics, camphor, when he wishes a prolonged stimulation; and musk, for "combatting a sudden danger from weakness of the heart."

For dryness of mouth and sordes, give pieces of ice; rinse mouth with red wine, soda water, or solution of chloride of lime.

DISSERTATION.

IMPORTANCE OF THE EARLY RECOGNITION OF EPILEPSY.

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The paper which I have the honor to submit to the Society is one which treats of an eminently practical subject, handled I trust in a practical manner. It is upon the importance of the early diagnosis of epilepsy in its principal forms. This essay is also a logical correlative of the one which I presented to the Medical Society of the State of New York in February of this year, upon the early diagnosis of some organic diseases of the nervous system.

My attention has for several years been attracted by the fact that most cases of epilepsy were allowed to go on for months or years, perhaps passing the stage of curability, without a correct diagnosis and proper treatment. The mistakes of this sort which come under the observation of specialists are very numerous, and many of them have been committed by leading members of our profession. I shall present a number of histories of cases illustrating these errors of diagnosis, and I would earnestly request my readers to bear in mind that I cite these mistakes only for the purpose of instruction, and not at all with the idea of fault-finding or of exalting my own diagnostic acumen. Several of the physicians referred to anonymously in the following pages are gentlemen who are really eminent as teachers and practitioners, and at whose feet I should be glad to sit. Their errors were not due to carelessness or ignorance, but to a too ready acceptance of medical laws which pass current, yet are wrong.

The subject in hand is really a very complicated one, and I can not pretend, in a paper whose length is limited, to enter into full

details concerning the diagnosis of all the forms of epilepsy, and of the various symptom-groups which may be mistaken for it. To do this would involve a prolonged and minute discussion of many mooted points.

All I can do is to show that in most cases even the first attacks of epilepsy, of grand-mal, and of petit-mal can be recognized as epileptic.

I shall first relate cases in which the grand-mal or regular spasmodic attacks were allowed to go on without proper treatment for want of a correct diagnosis, and offer some comments on each case.

CASE I.—*Female child, aged eleven years, seen May, 1881.* Was always a bad sleeper, of restless disposition, and irritable. Was easily made to turn pale under excitement. Nights disturbed by talking, crying, and even by nightmare. Five years ago the family physician regulated child's diet and instituted some simple treatment; since which attacks of pains have been infrequent; very rare during the past winter. Never had chorea. Indigestion has been a prominent feature in the child's life; she was fond of sweets. The urine was often found laden with oxalate of lime, and once, last autumn, a trace of albumen was discovered.

As regards any tendency to epilepsy, it appears that the child's mother is very nervous, and that one of her brothers was epileptic from childhood in consequence of a fall(?).

In June of last year the patient traveled about somewhat, alone with her father, without the supervision of mother or nurse. Was probably a good deal exposed to the sun. On or about June 20, in the early evening, while out on the grass fell in a severe convulsion. Seemed in poor health afterwards, and the family physician, considering the attack as caused by indigestion, or at any rate as symptomatic, prescribed a strict diet and an occasional dose of calomel.

On Sept. 29, in the cars, returning home from the country, was excited and overheated. After arriving at the house had her second attack, characterized by loss of consciousness, universal spasm, frothing at the mouth. Did not bite tongue, and was not inclined to sleep after fit. Traces of albumen in urine. Treatment was still directed to the disordered state of the digestive apparatus as a cause of the epileptiform attacks.

A week later, Oct. 6, after some excitement, in presence of her mother, suddenly fell in a convulsion, lighter than the previous ones.

After this a moderate bromide treatment was added to the management of the case, and no attack occurred until April 25, 1881.

The bromides, though given judiciously and by a very skillful hand,

produced irritability and other disagreeable symptoms, which led the child's mother to cease giving them some time in January.

An attack on April 25 was characteristic but slight; followed by sleep. After it urine found laden with oxalate of lime.

May 2, while the child was being prepared for bed, she felt some warning sensations (not a definite one), rushed, nearly undressed, to her mother, stood speechless before her, and was slightly convulsed in throat.

A sixth and last attack occurred in the evening of May 8. Sat in a spasm, foamed at the mouth; was rigid one instant, and then had clonic spasms of extremities; face not convulsed (?). Pupils not observed.

There have been no "dizzy spells" or petit-mal.

It is needless to add that I advised a resumption of the bromide treatment in this typical case of epilepsy, with special precautions against severe bromic symptoms.

This case is peculiarly instructive, because the physician who treated it as one of lithæmia and oxalæmia, with symptomatic convulsions, is a very unusually intelligent practitioner and a gentleman of high standing in the profession. His judgment was warped by the currently accepted notions of the frequency of eclampsia.

CASE II.—*Mrs. C. S., thirty-four years, seen March, 1879.* Former health good. During 1876-7 she had had much of malarial fever, irregular chills and attacks of fever.

In April, 1878, after having been confined to the house by an attack of fever, she had a first convulsion. This occurred in sleep, after dinner, at about two o'clock P. M. It was a full convulsive seizure, in which she bit her tongue, fell heavily from the lounge on which she was lying, and hurt her face.

A second attack recurred on the night of August 2d. She groaned, was convulsed, frothed at the mouth, and bit her tongue.

A third attack of grand-mal occurred in the night of Jan. 1-2, 1879. This was less severe, but she bit her tongue.

Has had few attacks of petit-mal, consisting in momentary confusion.

The significance of the first attack was ignored in this case, and a bromide treatment was not begun until after the second seizure. Since then has had bromide irregularly, at times too little, sometimes none at all, and occasionally too much.

Etiology obscure. Owing to patient's age and the absence of any inherited tendency, I inquired particularly as to symptoms of syphilis, with negative result. Frequent examinations of the urine have shown no sign of renal disease. As regards syphilis, the subsequent course of events, improvement without mercury or iodide of potassium, has justified my conclusion at the time of examination.

It is sufficient to state, with respect to treatment, that Mrs. S. was put upon a careful course of chloral and potassium bromide, which last year

was changed to ammonium and potassium bromides. She has never required very much of the anti-epileptic medicines, and at times has had various tonics.

To the present time, May, 1881, a period of twenty-nine months, she has had no attack of either kind, and her general health is excellent. Since the beginning of the year I have made a small reduction in the amount of bromide, and intend to make a further reduction of a few grains every three months. Her present dose of the mixture of ammonium and potassium bromides is .50 (7.5 grains) on rising, and 2.5 (37.5 grains) at bedtime.

If, after exclusion of uraemia and syphilis, the first attack had been diagnosticated as epileptic and treatment instituted, the probability of cure would have been greatly enhanced. The next case is in illustration of this statement.

CASE III.—*Miss F. O., aged sixteen years, seen May, 1878.* A well-developed, healthy girl, menstruating since three years with little pain. Mother neurasthenic; one brother had an exquisite attack of articular nemromimesis (both ankles). Patient never hysterical.

Yesterday, May —, menses were flowing, when, in order to be able to go with comfort to a dancing-school *soirée*, she used a cold foot-bath and checked the flow. She danced a good deal in the course of the evening, and then took supper. To day arose late, and seemed languid. At about seven P. M. had a severe fit; gave a cry, lost consciousness, fell heavily; body was rigid and pupils wide open, then had clonic spasm, frothed at the mouth, and bit her tongue; was stupid and sleepy after attack, whose actual duration was not timed. It was witnessed by a very intelligent young gentleman, who gave me the above particulars. I saw the patient at eight o'clock, one hour after the fit. She was conscious, complained of headache, of soreness in body generally, and of her bitten tongue. The pulse was rapid, the axillary temperature was over 37.8° C. (100°+ F.); the patient's face and neck were covered with numerous minute petechiae resembling flea-bites; menses had returned.

The seizure was typically epileptic. I anticipated a return of attacks only at the menstrual periods, and consequently instituted a rather peculiar treatment, which was carried out with unusual faithfulness. Bromide of potassium 1.50 (about gr. xx) was to be taken night and morning for ten days, including the menstrual period; beginning three or four days before it; and the patient was to be kept in bed or on the lounge for two or three days at the beginning of the flow.

A few days ago (May 14, 1881) I had a note from the patient's mother, stating that her daughter had never had a return of spasm (or any other epileptic manifestation), and that she was still keeping quiet for two days in the menstrual week, and taking bromide of potassium.

This makes an interval of more than three years, and I must say that I consider a return of attacks exceedingly unlikely. Still I have recom-

mended continuing the periodical treatment for six or eight months longer.

CASE IV.—*Mr. C. D., aged twenty-one, seen February, 1877.* Patient is a large and well-developed young man, something of an athlete. Former health good, but hygiene bad; used wine and tobacco from twelve to eighteen years, and probably committed sexual excesses. No epilepsy in family; mother subject to migraine, patient not. No dizzy spells. Head not injured.

First attack occurred when he seemed in good health, on Christmas day, 1873. Was sliding down hill, when he lost consciousness and fell off the sled, remained stiff for a few minutes, and was sick at his stomach. From his knowledge of the circumstances, and from what he was told, the patient is positive that the fall from the sled was not accidental, but that he first "fainted." In two or three days was perfectly well.

Remained perfectly well for ten months, and had a second attack in October, 1874. Was sitting chatting with friends; lost consciousness, became stiff, was sick at the stomach, did not bite his tongue. Had muscular soreness the next day. In the summer of 1875, after rowing on Lake George, had a third attack, without aura; fell off a dock into the water. Fourth attack in May, 1876, preceded by an undefinable preliminary sensation; attack was again accompanied or followed by vomiting. Fifth attack in October, 1876. This was treated by Dr. X., as stated in the letter which is appended. Another attack occurred toward the close of 1876, and the seventh (last) seizure was on Feb. 9, of present year (1877), without warning or vomiting. In the other attacks the warning sensation was quite prolonged; on one occasion was able to walk nearly a quarter of a mile before falling.

He has had no petit-mal, and general health has been unimpaired. Has done well at college.

The following letter was sent to me with the patient, and it well illustrates the erroneous notions which prevail with respect to the significance of a single epileptic fit, or of fits returning at long intervals.

NEW YORK, Feb. 11, 1877.

"..... This will be handed you by Mr. D., who has been under my care for some time with epilepsy. At first I attributed his attacks to gastro-intestinal causes, and rectified all bad habits of life and regimen. The disease recurred, and then I put him upon a diet exclusively vegetable and interdicted stimulants. He will tell you how he has fared upon this plan....."

It appears that Mr. D. was first prescribed for by Dr. X., who is a very eminent practitioner and teacher in New York, after the fourth or fifth attack, in 1876, when the disease had been going on two years and

more. No bromide of potassium or sodium had been given until within a very short time previous to the consultation.

Though foreign to my present purpose, I might add that a bromide treatment, consisting in giving only a night dose of from 4. to 5. (60 to 75 grains) of bromide of potassium has greatly improved the patient.

After the consultation some attacks returned, and I find the following record, July 16, 1878: Mr. D. returned from Germany a few days ago. He has had no attack since the beginning of August, 1877. Once in Europe had a slight threat of attack, without loss of consciousness. Has led a regular, quiet life, and has taken 4. (60 grains) of potassium bromide every night without omission. General health excellent.

4th August, 1879, no attack since threat in Germany, 20 months ago. Takes 4. (60 grains) nocte; ord. reduce to 3.5 (50 grains).

Oct. 19, slight attack after an interval of 28 months; fell and bit his tongue. Ord. 4. at bedtime.

Dec. 6, no attack.

September, 1880. In August, under excitement, felt faint, but this attack was not sudden, and he preserved his consciousness. It is now nearly one year since last attack. Takes only 2.75 (41 grains) bromide of potassium at night. He reduced without advice.

Oct. 14, slowly developed attack, without local aura; felt confused before losing consciousness; had spasm, but did not bite tongue. Ord. 4. (60 grains).

Jan. 5, 1881. No attack. Through erroneous weighing of Kbr., has taken only 3. (45 grains) every night. Ord. 4. (60 grains).

March 23, no attack.

Summary: since August, 1877, only two epileptic attacks, and one "threat"; this is a period of now (June, 1881) nearly four years.

Has finished study of law, and is in good physical and mental health.

CASE V.—*Ira K., aged eight years, seen February, 1877.* Was a healthy baby, no convulsions while teething. When two years old fell down a long flight of stairs without apparent injury. Remained well. When four years of age, fell from a horse, cutting the scalp in the occipital region; no loss of consciousness or vomiting.

In six or seven months after this injury, about three and a half years ago, had a first (?) nocturnal epileptic attack. Until lately has had chiefly nocturnal spasms. At first had a few diurnal seizures, and again lately.

Has had much petit-mal, increasing in frequency, of late almost daily. This consists in staring, loss of consciousness, a "hum" or "hem" noise, and sometimes slight jerking of the arms, and throwing back of body.

In the last few weeks child has been less bright and has exhibited a thick articulation.

During long periods of time, this child was treated "for worms" and for "disorder of the stomach."

CASE VI.—*Mary C.*, aged sixteen years, seen October, 1879. Born healthy and remained well until sixth year, when after indulgence in green fruit she had an attack of very severe convulsions lasting two hours; did not bite her tongue, and there was no consequent paralysis.

This was succeeded by numerous "fainting turns," as the mother calls them. In these the child was unconscious, pale, still, with eyes open and staring. This was petit-mal; the next attack of grand-mal occurred in two years, and afterward the convulsive seizures became frequent, from one or two in one day to one in two or three weeks.

The child had an irregular bromide treatment.

Since has had three types of attacks: petit-mal (rarely now), grand-mal and mixed attacks. One of the last kind was witnessed in my office, and is thus described in the case-book: "Makes complaint of aura, asks for amyl, dilatation of the pupils, pale face, general spasm of semi-tonic kind, muttering, raising of clothes, picking or grasping at chair, incoherent remarks, makes some swallowing movements, does not bite tongue or froth, return to consciousness."

The aura referred to is almost always felt; it consists in a sensation just above the umbilicus, not ascending, but feeling as of a "soft whirling" or "trembling" sensation in the abdomen; no nausea.

I mention this case because of the apparent etiology. It may have been looked upon as a case of convulsion and vertigo from gastric irritations and treated accordingly. It certainly appears that a serious bromide treatment was not given during the first two or three years of the disease.

CASE VII.—*Clara C.*, aged five years, seen April 1880. In February 1879 had a first attack of convulsions, on both sides of the body.

In four weeks experienced a second bilateral attack. In April there recurred an attack in which the spasm was wholly limited to the left side of the body, followed by a number of others, all within a period of twelve hours, no consequent paralysis. In the month of May, passed through another *status epilepticus*, in which some of the spasms were on the left side, others bilateral. The bromide of potassium was then steadily given until June, when the mother suspended its use. Had no treatment and remained free from attacks until February, 1880, when a *status epilepticus* of forty-eight hours' duration occurred; most of the spasms were bilateral, and a few involved only the left arm and leg: never bit her tongue. Early in March several attacks in a group. Paralysis has never been observed after attacks, but the child is cross and has headache after them. Most of the attacks have been nocturnal.

Recently one dizzy-spell.

After this consultation, a stricter bromide treatment was attempted, but never faithfully carried out by mother.

Status epilepticus occurred in June and September, 1880: many attacks limited to left side. After June attacks she was almost maniacal for one month.

From January 21 to February, 1881 (when last seen), many seizures, most of them of mixed type, some like petit-mal, calling out, with slight shaking of both arms, staring, and pallor of face. Very unmanageable, semi-maniacal at times, in last few weeks.

Family neurotic, maternal grandfather subject to violent neuralgias about the head (specific?), mother of child had convulsions from eighth year, for how long a time and of what kind it is impossible to learn.

Careful examinations of the child on two occasions, nearly one year apart, gave no objective symptoms indicating the existence of what one would naturally suspect, *viz.*: a localized lesion (tumor?) in the right hemisphere of the brain.

For many months the physician in charge of the child and the consulting physician, a man of great eminence, ignored the truly epileptic nature of the child's attacks, asserted their curability, and treated the child carefully for worms and for disorder of the digestive organs.

CASE VIII.—*Jas. W., aged twenty-one years, seen October, 1878.* Health has been good; denies masturbation, sexual excesses, and syphilis. Married fifteen months ago, and has one healthy child.

First epileptic attack occurred three years ago, and the second after an interval of eighteen months. Since the second attack has had seizures with increasing frequency; thirteen in the last twelve months. Last seizure occurred yesterday. The attacks have all been nocturnal, occurring at from one to five o'clock A. M., and characterized by severe spasm, biting tongue, and passing urine in the bed, and followed by heavy sleep. The next morning has headache.

Did not have treatment until after attacks became frequent.

This case is interesting as showing the real significance of a first epileptiform seizure in a non-syphilitic and non-uremic adult. The patient had epilepsy just as much after the first attack as he did when the seizures recurred every two or three weeks, and the proper time for successful treatment would have been after the first attack.

CASE IX.—*Mary L., twenty-two years, seen October, 1880.* When only three weeks old had a series of convulsions in the course of one week, followed by cyanosis. Afterwards was subject to "screaming spells," in which she threw her body forcibly backward.

From fourth to eighth year no attacks of any kind. When eight or nine years of age had attacks of unconsciousness, in which the eye rolled up, the appearance was statue-like, with a cataleptic state of the limbs. These attacks have occurred daily since; on some days she has had as many as ten or twenty seizures.

Menstruation occurred at thirteen years, but the attacks continued unchanged. Went to school at usual age, but study was abandoned in twelfth year, nominally because of "indigestion," but in reality because patient's mind was feeble; she was to a degree imbecile.

In the last fourteen months has had five attacks of grand-mal; the first in August, 1879, the last one about two weeks ago. In these severe attacks she did not bite her tongue. Has had fewer attacks of petit-mal since these convulsions.

Patient states that she has no aura; as to frequency of petit-mal, she thinks that she may have had as many as one hundred "spells" in one day.

The existence of neuroses in the family is denied. The cause of the second series of epileptic phenomena (from eighth year) appears to have been masturbation, which was practiced from the sixth or seventh year until some time after attacks set in. Positively denies self-abuse in the last few years.

This young woman's father was a physician, recently deceased, but the epileptic nature of the disease was not recognized until the convulsive attacks of 1879-80.

CASE X.—*Mrs. C. A. R., aged twenty-eight years, seen December, 1878.* Was a robust, healthy girl; menstruated in thirteenth year. In the same year had a very severe attack of typhoid fever, followed by great debility of body and mind. Sexual feeling which had already been experienced by the patient disappeared and has never returned. Menses continued nearly regular. At an uncertain time (not long) after the fever began to have petit-mal of the faintest kind; a mere momentary blurring or loss of consciousness; at frequent but irregular intervals.

Married at eighteen, and has borne children. Petit-mal has continued occasionally. At about twenty-one had a first convulsion one morning after rising; she frothed at the mouth and bit her tongue. In about two months had a second, equally severe attack, and a third one thirteen months later. Then was given bromide and valerian, but irregularly. Four years passed without any convulsions, but she continued having petit-mal at intervals of a few days to three weeks in length.

In 1876 was in Europe traveling, not eating much and using stimulants; had an attack in the summer (grand-mal), and three since. The last one occurred six weeks ago, in the night. Petit-mal occasionally.

In reality this patient was epileptic some twelve years without having a proper diagnosis and treatment.

CASE XI.—*Lizzie B., aged twenty-seven years, seen July, 1880.* Since the age of eleven or twelve years has had peculiar attacks, consisting of a sensation of something starting in the epigastrium and rolling up to throat, lasting only a few seconds, not accompanied by tears or other emotional disturbance. Thinks that her consciousness is not lost; calls for hartshorn. At first these attacks occurred once in three or six months; in the last year has had them every two or three weeks. The true nature of these attacks was ignored, though patient was under the constant supervision of a good physician.

Menstruation established at fourteen years (long after first petit-mal); irregular and with pain.

In March, 1880, patient had a regular convulsion, and a slighter one a few days ago. These attacks are described by patient's sister; she herself thinks that they were "long faints." [This shows how much reliance is to be placed on her other statement that she preserves her consciousness in the slighter seizures.]

It was only after the spasm in March that a bromide treatment was instituted. Patient went home in October.

Since January, 1881, quite a number of attacks of grand-mal.

CASE XII.—*Dr. ———'s son, aged twenty-two years, November, 1880.* Patient not seen; statement made by the father.

From twelve to sixteen years had occasional "frightened spells" or "faint spells." No details.

In sixteenth year first recognized epileptic attacks; usually nocturnal; grand-mal at intervals of one or two months. Four attacks in the last four months. In attack spasm begins on the left side of body, and is most severe on that side; the tongue is bitten, and there is frothing at the mouth.

In 1878-9 had no grand-mal (interval of nearly two years).

At age of six or seven years fell on the ice, striking on his forehead; lost consciousness and vomited.

Masturbation begun in eighth year, probably before petit-mal, which it appears began before the twelfth year, as stated in commencement of the history.

The father, though a practicing physician, paid no special attention to the petit-mal, and attributed the first convulsions to late suppers and gastric irritation in general.

The above cases indicate that the error usually committed in judging of the true nature of first epileptic seizures is in considering them to be sympathetic convulsions, due to remediable causes—in other words eclamptic attacks.

This capital diagnostic error is founded upon two erroneous conceptions, in my opinion :

1. A physiological misconception. In the first two years of life there is great convulsibility; the spinal axis is excessively irritable, and many causes, local, diathetic, and thermal may produce convulsions. Thus pneumonia, exanthemata, infantile spinal paralysis, intestinal worms, gastric irritation, gingivitis, sexual irritation, etc., may cause convulsive attacks, which are usually called eclamptic. If the cause be removed such attacks do not recur. In the third and fourth years of life, more or less rapidly according to the constitution of the child, this mobile state of the spinal axis diminishes, the inhibitory cerebral influence is more and more shown, and the tendency to reflex spasmodic manifestations almost disappears.

The misconception lies in admitting beyond the truly infantile age (3 to 4 years) a liability to symptomatic or eclamptic convulsions.

There are exceptions, of course; some few children and even adults (especially females) show convulsibility, but I believe that it may be stated as a law most useful in estimating the significance of a first fit, that after the third or fourth years eclamptic attacks (except from uremia) are excessively rare. A first rule for the study of convulsions then is, that convulsibility diminishes rapidly after the third year.

2. An etiological misconception, consisting in overestimating the exciting powers of local, internal peripheral causes. The doctrine of reflex neuroses, reflex neuralgias, reflex spasms, reflex paralyzes, and of reflex psychoses has fallen from the very high standing it acquired, mainly under the influence of Brown-Séquard, some fifteen or twenty years ago. Reflex diseases of all kinds are now rarely reported by reliable observers, and more especially is this true of paralysis. That there are reflex nervous diseases I recognize, but I claim that they are not by any means as common as is usually believed.

More especially would I maintain this with respect to convulsions occurring after the third year of life. Cases of convulsions, or epilepsy, in individuals above three years, due to cuts, blows, worms, adherent prepuce, etc., etc., abound in older medical writings, books and journals; but in the last ten years, physicians have become much more guarded, and such cases, when reported, are considered very interesting because of their rarity. Leaving out injuries about the head, I am not sure that I have met with such a case.

I would suggest as a second safe rule in studying first convulsions that after the third year of life, local irritations, internal or external, are not likely to cause convulsions without the existence of a morbid state of the nervous centres, inherited or acquired.

The terms eclamptic and epileptic as applied to convulsions accompanied by loss of consciousness, have been the source of great confusion. The words are often used as if they designated different symptom-groups, whereas, in reality, as sanctioned by observations and by the best authorities in our art, they mean the same symptom-group, occurring under different conditions.

I might support this statement by numerous citations, and by a minute description of a variety of attacks of each kind, but my

time is short and I will content myself with giving the opinion of a few authorities.

In the first place Professor Trousseau says : *

“I have often known epilepsy and eclampsia to be confounded one with another, and I have also said that this confusion is almost inevitable, because, if we study only the convulsive manifestations of these two affections, they are indistinguishable.

If you observe a woman attacked with eclampsia in the eighth or ninth month of pregnancy, or during confinement, or a child who is convulsed either at the beginning of an eruptive fever or during dentition, however you may be on your guard, however careful you may be in your observations, you cannot make out any [symptomatic] differences between these attacks and the convulsive form of morbus caducus.”

Dr. Day in the recent edition of his excellent work on diseases of children, † quotes with approval Trousseau's statement as to the similarity of eclamptic and epileptic attacks; the latter being the former repeated in a series; and adds when speaking of eclamptic attacks :

“In many respects they (the convulsions) resemble epilepsy, from which indeed they cannot invariably be distinguished.”

An encyclopedic treatise on diseases of children is being issued in parts in Germany, and the opinions of its numerous authors, all men of high standing, will be received with respect. ‡

Dr. Otto Soltmann, of Breslau, in treating of epilepsy, says (page 103):

“The eclamptic attack cannot be distinguished by its symptoms from the epileptic attack.”

Nothnagel, an authority upon the subject of epilepsy, writes as follows of eclampsia in Ziemssen's Cyclopedia : §

“What is there now remaining of what was formerly recognized as eclampsia? Are we altogether justified in still retaining the name? We believe so, and are of opinion that the title of eclampsia should be reserved as the name of an *independent affection*, which

* Clinique médicale de l'Hotel Dieu de Paris, vol. I, p. 88, 2d edition, Paris, 1865.

† The Diseases of Children, p. 607, Am. edition, Phila., 1881.

‡ Handbuch der Kinderkrankheiten; Herausgegeben von Dr. C. Gerhardt. Tübingen, 1879-80. Bd. V. abth. I. 1st Hälfte, Krankheiten des Nerensystems.

§ Cyclopedia of the Practise of Medicine, Edited by Prof. H. von Ziemssen. American Edition, vol. xiv, article on Eclampsia, pp. 301-2.

it is true can at present only be defined by its clinical symptoms. We propose that the designation eclampsia should be made use of for those cases of epileptiform spasms which—independently of positive organic diseases—present themselves as an independent acute malady, and in which—so far as our present knowledge allows us to judge—the same processes arise, generally in the way of reflex excitement, and the same mechanism in the establishment of the paroxysms comes into play, as in the epileptic seizure itself. In this way, as we see, *the designation of eclampsia as an acute epilepsy finds greater authorization* [the italics are my own]; at the same time it is distinguished from true epilepsy by the lack of a persistent central change, which latter impresses upon epilepsy the character of a chronic condition. In the case of eclampsia, where this chronic change is absent, the manifestations, the seizures, disappear with the removal of the exciting irritation ”

We may sum up these statements of high authorities by saying that eclamptic and epileptic attacks are similar in character and practically indistinguishable.

This being admitted as true of the *symptoms*, we yet have the two *affections*, eclampsia and epilepsy to differentiate; and it is this differentiation or differential diagnosis which is all important for the welfare of our patient. It is not so very serious to consider eclampsia as epilepsy for a few months, but the converse mistake, the one illustrated by the cases I have read, the mistake which I believe is common is in one sense fatal to the patient. The non-recognition of epilepsy allows of recurrence of paroxysms and the establishment of the epileptic habit.

Upon what grounds can a reasonably accurate diagnosis be made? I believe this can generally be done by attention to the physiological law of convulsibility, and to the relatively small importance of local irritations, internal and external, after the third year of life, or a cause of eclampsia. These two points have already been referred to at some length. A third rule which must be borne in mind is that at almost any period of life uremia may cause eclampsia. This is more especially true of young subjects who have just passed through scarlatina with nephritis or who have had symptoms of renal disease from any cause; and also of adults, males between thirty-five and fifty, who are liable to contraction of the kidneys.

A fourth diagnostic rule is that in adults particularly, syphilis may cause eclampsia (i.e., acute, curable epilepsy).

Plumbism and alcoholism sometimes cause eclampsia, but probably in most cases by producing renal changes and uremia

To apply these principles to practice, let us suppose cases of first convulsions with loss of consciousness, occurring in subjects of various ages.

1. Convulsive attacks in young children, under three years.

If we can exclude injury to the head, gross organic disease of the brain, and microcephaly from premature closure of the fontanelis, the attack is probably eclamptic. This probability is increased to almost a certainty if we can accurately determine the existence of sufficient systemic or local causes for the attack.

Upon this question of sufficiency of the cause much might be said. Often the physician is satisfied with merely determining the coincidence of a fit with a local irritation, or a supposed local irritation. Soltmann* is especially emphatic in his advice to judge these co-existent conditions carefully before pronouncing them to be causes, and the attacks to be merely eclamptic.

The occurrence of a single fit enhances the probability of its being the first seizure of epilepsy.

The occurrence of repeated attacks in the course of an hour or two, makes it probable that the convulsions are caused by fever, by gingival, gastric, or intestinal irritation, or perhaps by some peripheral cause.

2. Convulsions in young persons from three to fifteen years of age.

These are quite certainly epileptic, if we can exclude renal disease. The occurrence of attacks of an eclamptic nature (i. e. ephemeral and curable) in such subjects from intestinal or gastric, or sexual irritation is exceedingly rare, and the mistake, the terrible mistake of assuming such to be the pathology of convulsions is frequently made, even by experienced physicians.

I would repeat, and the foregoing cases bear me out, that convulsions from worms, from indigestion, from lithamia or oxaluria, in youth, are excessively rare, and that in the treatment of such a case the patient should be given the benefit of the doubt and put upon a rigid anti-epileptic treatment by means of bromides, while the treatment for the supposed local or diathetic cause is being carried out.

3. Convulsions in adolescents and adults.

These are to be judged by the same general rules as No. 2, with the addition that two morbid conditions should be carefully

* l. c., pp. 49-54.

searched for, especially when the first convulsion occurs after twenty.

a. Syphilis. This may be acquired at almost any age, but especially after sixteen or eighteen years, nothing in the social standing of the patient should deter the physician from inquiring delicately yet deeply into this question.

b. Chronic interstitial nephritis, more particularly in subjects of forty years and upward. The presence of a hard pulse, of overaction and hypertrophy of the heart, the passage of an excessive amount of urine or low specific gravity, sometimes containing albumen (never much) and a few hyaline or granular casts—these symptoms go to justify the diagnosis of contracted kidneys, consequent chronic uræmia, and the recurrence of eclamptic attacks.

If we exclude these two pathological conditions, a convulsion in an adult, especially if a single fit, is quite certainly epileptic, and will be followed by others, after a lapse of time which may vary from a few days to more than a year. Of course the existence of a long interval of health after one epileptic attack in no wise justifies a physician in pronouncing the disease not to be epilepsy; as is shown by some of the cases I have read, and by numerous others which I might cite.

To sum up the early diagnosis of convulsions:

1. After the third year such attacks are very probably epileptic. The possibility of uremia and of syphilis should be borne in mind and a careful investigation made as to their existence.

2. Under the third year the attack may be eclamptic, probably is, but its causes should be carefully judged.

3. In many cases under three years it is well to give a moderate amount of bromide of potassium (or sodium) with regularity for several months after a convulsion; that is to say in such cases as do not present an evident, indisputable pathological condition sufficient to cause eclampsia.

4. In all cases above three years the bromide treatment should be at once instituted and kept up for many months.

This will not interfere with the treatment by appropriate remedies and by hygiene of gastric or intestinal indigestion, of worms, of sexual irritation, of uræmia, and of syphilis.

Besides bromides, a variety of treatment is demanded by different forms of epilepsy according to the pathological condition, but the consideration of these indications is foreign to this paper, whose main object is to encourage the prompt and proper treat-

ment of epilepsy at the earliest possible moment, viz., in most cases after the first attack.

I am confident that if this were done, the prognosis of convulsive epilepsy would be greatly changed for the better.

I now pass to the consideration of the diagnosis of petit-mal, consisting of epileptic vertigo (so-called), and of imperfect or aborted spasmodic seizures.

In this category I do not include the localized or hemiplegic epileptic spasms, which I have treated of in a former paper.

Petit-mal or epileptic vertigo is often allowed to pass for vertigo caused by indigestion. In my experience physicians are very loath to call these slight attacks by the terrible name of epilepsy, and so delude themselves and their patients until the recurrence of a convulsive attack settles the question.

Besides, I find that even when the attacks are recognized as epileptic, a most unfortunate statement is made that they are slight and manageable attacks; whereas the truth is that petit-mal is much more intractable than grand-mal, and often leads to more evident mental deterioration.

The correct diagnosis of petit-mal is feasible, providing a good description of the seizures be had.

From vertigo it is distinguished by:

1. The subjective phenomena. In vertigo there occurs a sensation as if the patient himself or objects about him were whirling around; in petit-mal there is no such feeling, but a sensation of confusion or of something rising from the throat or epigastrium to the head. In some cases there are no sensations in the head, beyond the consciousness that something is wrong for a moment.

The sensations of petit-mal are, moreover, usually sudden, or even flash-like, whereas in vertigo, cardiac syncope, and some hysterical attacks there elapses quite a time in which the attack is growing. This suddenness of onset is very characteristic of minor epilepsy.

2. By objective phenomena. In faints and in some hysterical state the patient is limp from the start, and in other hysterical attacks there is spasm lasting many minutes. In petit-mal there is nearly always spasm, but not as in grand-mal. It usually expresses itself by a momentary rigidity of the whole body, with staring eyes and wide pupils. To express it otherwise, there is for an instant an unnatural immobility, the patient is as it were petrified for a few seconds. The friends of patients will usually accept the suggestion that the patient is statue-like in the attack.

It is to be borne in mind that in some cases the patient keeps his equilibrium, or even continues to walk. Nearly always, however, the action which the patient was doing at the moment (eating, talking, walking) is impeded or interrupted, to be resumed naturally after a few moments.

Some of these attacks of petit-mal are literally like a flash, just a moment's obscuration of consciousness. The consciousness is wholly lost in the various forms of petit-mal; though many patients will claim the contrary. The truth is usually easy to learn from the patient or friends of the patient, and is at once evident if you happen to witness a paroxysm. I am in the habit of not relying upon an epileptic's statement that he is conscious during an attack without sufficient corroborative testimony.

The dilatation of the pupils and their immobility, and the open state of the eyes, are capital symptoms.

In syncope and hysteria the eyes are closed and the muscles limber. The eyes in hysterical "faints" present an almost pathognomonic appearance; they are rather tightly closed, and present vibrations or quivering motions due to the prolonged effort at closure. In neither of these conditions is the pupil fixed and widely dilated, as in epilepsy; this is a symptom which cannot be imitated.

Vertigo from gastric disorder is characterized by a sense of whirling in the head, and often a sensation as if the ground were opening in front of the patient, or falling away from before him, with impending precipitation. The observer notices no dilatation of the pupils, or staring, or momentary stiffness of body; the patient can speak at any time. In severe cases the vertigo is very frequent and is produced by the least motion.

I cannot enter fully into a description, for diagnostic purposes, of each and every variety of petit-mal. This would take a long time.

Allow me to refer to the intermediate attacks, in which there is some jerking of one of the limbs, or in which the patient says or does something odd. In some cases the patient will rise suddenly from a chair, walk rapidly about, muttering something. In other cases the patient will lie back in his chair with the epileptic facies and jerk both arms or the limbs on one side of the body for a few moments. In other cases the patient being out of doors walking in the street loses himself for a few blocks, and is surprised at his change of location. In other cases there may be incoherent or

semi-coherent talking. Other patients simply stare and make swallowing movements, with or without drewling. Other patients fumble and fuss about with their hands while staring and unconscious.

The unconsciousness and the attendant pupillary phenomena are the chief diagnostic symptoms in these cases; but a very important element in the differential diagnosis between these attacks and hysterical ones is that the latter present variations each time, whereas the mixed epileptic seizure is almost a stereotyped performance; one or two sets of movements being done by the unconscious subject.

Still other cases of non-spasmodic insanity occur in the shape of periodic or paroxysmal attacks of mania or melancholia. In some of these cases the careful observer finds that a nocturnal fit or an unobserved diurnal paroxysm ushers in the psychosis; but in other cases the mental disorder appears in a periodic epileptoid manner, and convulsions or petit-mal make their appearance later on.

I have already given it as my opinion, or rather as the summary of my experience, that petit-mal is often ignored for years, and is usually looked upon as a trivial affection.

It is my present purpose to urge the early recognition and careful treatment of this seemingly insignificant symptom. It appears to parents and too often to physicians as infinitely less serious than grand-mal or fits; yet I can assure you that the contrary is true.

Petit-mal, especially the flash-like form, is exceedingly rebellious to treatment. I have now several little patients who continue to have several "turns" a day in spite of as much bromide, etc., as their systems will bear. I have repeatedly had to produce severe bromism in order to barely control these minor forms of epilepsy, and any reduction of the medicine to a safer dose was followed by a return of symptoms. In taking charge of a patient who has such petit-mal I always explain to the parents or relatives the difficulty of the task they have brought to me. In my experience spasmodic attacks, even the most severe fits, can nearly always be controlled by a proper dosing of the bromides; they may even be suspended for months and years; but we have little control of the minor manifestations of the disease.

Still in all forms of epilepsy the date of its recognition as epilepsy is an all-important factor in prognosis. By repeated seizures a condition of the nervous system (epileptic centre?)

becomes established, which we designate as the epileptic habit, a condition which explains the remarkable fact that in some cases of symptomatic or reflex epilepsy the attacks continue after removal by surgical means of the morbid focus whence the attacks seemed to be produced.

By instituting treatment very early, if possible after the first or second attack, we eliminate this factor, and the chances of cure are greatly increased.

ESSAY.

SYMPATHETIC OPHTHALMIA.

S. B. ST. JOHN, M.D., HARTFORD.

The intimate relation and interdependence of different parts of the human system needs no demonstration even to the laity and surely none to the scientific mind. The physician who with blister or saline purgative seeks to overcome a congestion of the brain, but illustrates the faith of the woman who pierces the girl's ears to relieve the inflammation of the eyes. Nay, in this belief the laity go farther than we and ascribe to the wife, not only mental and emotional, but actually physical sympathy with the bodily ailments of her husband. This interdependence, so justly admitted by all, is nowhere more strongly shown than between organs whose functions lie in the same general direction, and, by consequence, it is strongest in *pairing* organs whose functions are identical. We cannot explain it by saying that the excess of work entailed upon one organ by the crippling of its fellow causes it to become involved through *over-use*, for cases can be cited by the hundred where one eye, ear, or kidney has quietly and without injury either to itself or to the system of which it formed a part, continued to do the work which formerly it shared with its fellow. No, the implication is an *active* not a *passive* one; a point in the diseased organ becomes a focus of irritation which transmits a morbid impulse to corresponding tissues in the fellow-organ over certain connecting nerve tracts. To the credit of ophthalmology be it said, so far as regards the sympathetic relations of the eye, the laws and the path of this transmission have been made the subject of such exhaustive study that we are enabled to say in what part of this little organ an irritation will be most likely to endanger its fellow sympathetically, or if the mischief has already begun, by what channels it

takes its way, and, in some cases, by severance of those channels to successfully interfere without resort to the complete removal of the offending organ.

Nearly half a century ago Von Ammon in his prize essay on Iritis (1) wrote: "Traumatic iritis in one eye frequently is transferred to the sound eye," and cites two cases, in one of which the symptomatic trouble appeared two months subsequently, in the other four months. The great Scotch ophthalmologist Mackenzie, in 1843, was the first to give the affection its proper place and importance, and from that time observations were recorded and measures taken to guard against it. In 1869 Mooren, in an elaborate work (2), aroused renewed interest in the subject, and the various divisions into which the affection is separable began to make their appearance. cases being recorded, not as sympathetic *ophthalmia*, but as sympathetic *iritis*, *cyclitis*, *chorioiditis*, etc. At the present time the subject has assumed a prominent rank among the affections to which the eye is subject, the more so since it may occur as the result either of disease or injury to the other eye.

Sympathetic ophthalmia has well been called an affection indefinitely deferred, insidiously developed, obstinately progressive, and deplorably blinding (3). As such it surely merits our most careful study, and the cases in which it may be impending demand our utmost watchfulness. Here, if anywhere, is the opportunity for the proverbial ounce of prevention, and it is the object of this paper to refresh your minds regarding the premonitory symptoms.

When a diseased or injured eye is presented to the notice of the oculist his thoughts naturally are first directed to the nature and situation of the lesion with reference to the treatment, but secondarily, he always considers the case in its relations to the other eye. A surgeon would certainly be derelict who would not at once take measures to prevent the contagion of gonorrhoeal ophthalmia from being communicated to the sound organ, if he saw the case when one eye only was affected, but no less blamable would he be if he did not watch for and strive against a sympathetic iritis in case of a traumatism affecting the ciliary region of the fellow eye. It will be a long step of progress when general practitioners of medicine are thoroughly impressed with the fact that a wound of the eye implicating the ciliary region—that zone which lies next to the clear cornea—is far more likely to cause sympathetic trouble than if it were wholly within the clear cornea, or even than if the eye were injured posteriorly while the anterior

half escapes entirely. Add to this a general conviction that a foreign body within the eyeball almost always gives trouble sooner or later, and that if accompanied by tenderness or subjective pain the condition is a threatening one as regards the fellow eye, and we shall have established a great safeguard, viz., suspicion of trouble to come, which some savant has said is the prominent characteristic of the able physician.

The *causes* of sympathetic inflammation of an eye are various, but by far the larger part come from *injuries* to the fellow-eye. Thus Alt (4) in an analysis of 110 cases found 83% to be due to traumatisms and 17% to idiopathic inflammation. The *situation* of the injury has already been alluded to as affecting the result, but even more important is the condition of the parts left in the healing of the original wound. Thus Alt found in 63% of all the injuries that a portion of the iris, or ciliary body, had been incarcerated in the wound. An ulcer of the cornea, therefore, which has little tendency to affect the other eye, may by perforating the cornea causing prolapse and incarceration of the iris, be changed entirely in its bearings upon this question. Indeed there were only 5% of Alt's 110 cases that did not owe their existence either to traumatisms or perforating ulcerations, and this proportion seems to hold good in all the recorded cases, of which many hundred are now on file.

From this view of the subject we should be led to anticipate the statement that Iritis, Cyclitis, and Iridocyclitis are the varieties of inflammation most calculated to arouse trouble of a sympathetic nature, and such is, in fact, the case, yet there are other forms of inflammation which are not wholly free from suspicion. Thus irido-choroiditis which often comes on in a subacute manner without very marked pain or tenderness is not infrequent when foreign bodies have penetrated deeply into the vitreous and have set up a sluggish inflammation of the deeper tissues.

We also see sympathetic trouble set up by a bony growth in the choroid of the fellow eye, a so-called ossification of the choroid, and this is not very infrequent in eyes that have been a long time atrophied and are undergoing the degenerative process incident to that condition, and for this reason an atrophic eye should always be looked upon with suspicion when unexplained irritative symptoms arise in the fellow organ. Bull (5) explains these outbreaks by a change of position of the chalky or ossified exudations irritating parts of the uveal tract, and probably the same reasoning shows

why a foreign body which has lain for many years imbedded in an eyeball, may suddenly become a focus of irritation, of which several instances are recorded (6). The presence of a foreign body within the eyeball is one of the gravest conditions as regards possible injury to the fellow organ, and until quite recently it was an accepted aphorism that in such cases the surgeon must either remove the foreign substance or the eyeball without waiting for further developments, but of late observations have multiplied by which it seems to be proven that a certain limited class of cases may be treated expectantly, if so situated that enucleation can be quickly resorted to if required. A case of the kind which came to me from Mass., where a piece of steel had entered the eye and could be distinctly seen, by means of the ophthalmoscope. to be lying upon the retina, has been kept under observation for 18 months and no symptom of irritation has yet appeared either in this or the fellow-eye. Some rarer causes of sympathetic ophthalmia are intra-ocular hemorrhage, tumors, dislocation of lens, cysticercus of eye, etc.

Some authorities lay stress upon a distinction between sympathetic *irritation* and sympathetic *ophthalmia*, on the ground that the former is not *invariably* the premonitory stage of the latter, and yet they admit that as regards treatment there is no use for the distinction, wherefore it seems to me that it is worse than useless, because it allays suspicion as to the formidable nature of the condition.

The *varieties* of sympathetic eye disease are comparatively small. Although some cases have been placed on record as such (7) it does not appear established that affections limited to the *conjunctiva* or *cornea* have any connection with inflammations in the other eye so long as they are confined to those tissues. With the *iris* and *ciliary body*, however, the case is quite different, and Iritis and Cyclitis form perhaps 90% of all affections of this nature. The *lens* is never the seat of the disease, though a dislocated lens may, by exciting an Iritis, produce trouble in the other eye. A very rare form in which the Choroid and Retina take part is described by Von Graefe (8), while several cases limited to the nerve tract and classified as Neuritis and Neuro-Retinitis have now been placed on record by Graefe (9), Pooley (10), Alt (11), Webster (12), and Brien (13). To these we may add a general inflammation or panophthalmitis (14).

The time intervening between the disease or injury of the offend-

ing eye and the sympathetic affection of the other is very variable, but is seldom less than 4 weeks, and in acute cases seldom more than 6 months. By this I mean simply that danger of acute sympathetic trouble is mainly over in 6 months, for it is well proven that sympathetic inflammation from chronic irritation may break out many years afterward; one case upon my records is unquestionably due to a gunshot wound of the other eye, received in 1863 at Gettysburg, and there are cases recorded in which 40 years have elapsed since the original injury.

The first symptoms are a sense of fatigue after moderate use of the eye for near work, especially by lamp-light, with a tendency to hold fine objects further away so as to see them distinctly, with, at times, a flushing of the eye after prolonged work, symptoms pointing towards an impairment of the accommodative power. With this is apt to be joined a slight irritability to bright light and some lachrymation. After rest these symptoms pass away, to be renewed when work is again resumed, and these attacks may be repeated many times without arousing even a suspicion that there is any serious condition present. At last, however, the attacks become so frequent that attention is arrested, and examination reveals the fact that the injured eye or the atrophied eyeball is slightly sensitive to the touch as well as the seat of occasional pains. This tenderness has been universally regarded as the most significant symptom since attention was first called to it by Von Graefe, in 1866 (15). As a rule, when an organ has lost its function and fallen into atrophy we are prone to think little about it, but it has been shown that the diminished tension of a shrunken eyeball directly favors the transmission to the fellow-organ of any inflammatory process of which it may be the seat. As the symptomatic trouble develops the symptoms become more prominent, but it is important to remember that the amount of pain depends largely upon the particular part of the eye which is inflamed. Thus if the iris or ciliary body be affected, we have complaint, as a rule, much sooner than if the choroid or retina is alone involved, and if the cause is a recent traumatism there is more pain than when a smouldering chronic inflammation is gradually transferred to the other eye. A case is cited by Abadie (16) where serious impairment of vision resulted from a gun-shot injury of the opposite side, which caused entire loss of sight in that eye, but without iritis or cyclitis in either organ, so that the soldier lost all the sight in one eye and more than half that of the other without any pain what-

ever, while the symptomatic nature of the affection was proven by the rapid restoration of vision upon the removal of the blind eye.

If the iris or ciliary region is affected, the appearances and symptoms do not differ in any marked way from inflammation of those parts not of sympathetic origin, and in many cases the determination of the special origin of the affection can only be made by an appeal to the test of enucleation. A point which Schweigger (17) thinks of value in this relation is that if the affection is sympathetic it will follow closely the improvement or retrograding of the eye from which it was derived.

The question of the manner in which, and channels through which the inflammation of a diseased eye makes its way to its fellow is one of the greatest importance, and as intimated at the outset, it is a problem which ophthalmology has successfully investigated. There is no doubt whatever that the ciliary nerves are the channels of communication, and there seems to be ground for believing that the optic nerve may also serve as a medium. The practical importance of this fact lies in the assumption that if these structures are permanently divided, the danger of sympathetic inflammation may be removed without having recourse to the enucleation of the eyeball which is nearly always a great advantage.

The *prognosis* of sympathetic ophthalmia is always grave, and if it has passed the premonitory stage of irritation previously described, it is decidedly unfavorable. Some authorities say that the removal of the offending eye, after the other shows evident signs of iritis, is useless, but the opinions of leading men and my own experience, lead me to believe that there is almost no period short of general inflammation of the orbital contents at which the removal of a painful tender blind eyeball would not inure to the advantage of the fellow organ. The question of removal of the offending eye, when the sight is still useful, presents one of the most delicate questions ever brought before the medical man, and this is rendered still more perplexing by such cases as that recorded by Pooley (18), where useful vision was retained in the offending eye, while the one secondarily afflicted became useless. We have, too, to remember that sympathetic ophthalmia sometimes persists after enucleation of the other eye (19), that enucleation is not invariably free from danger to life, cases being recorded where fatal meningitis has supervened (20), and we have also to consider the minor objection of the cosmetic effect in case the offending eye is

not badly deformed. The latter factor, and especially the fact that the intense natural objection to the removal of the eyeball often leads a patient to reject the means which the safety of the useful eye imperatively demands, lead us to turn eagerly to any substitute for the operation of enucleation in such cases as these. Such an one is the procedure which embraces the section of the optic and ciliary nerves through which the morbid impulses are conveyed without removing the eyeball from its place. This procedure is called "enervation," or anatomically, "optico-ciliary-neurotomy." It is by no means new in conception. The great founder of modern ophthalmology, Albrecht Von Graefe, in 1866 proposed the section of the ciliary nerves in ruined irritable eyeballs, by cutting from within and making section of the nerves corresponding to the region of greatest tenderness, but the section was necessarily incomplete, and was apt to be followed by atrophy of the eyeball. This operation was also done by Meyer (21), Secondi (22), Lawrence (23), and Solomon (24). In the same year Rondeau (25) made section of the ciliary nerves and *optic* nerve, from outside, with a curved tenotome. Boucheron (26), in 1876, experimented largely on animals, and in 1877 Dianoux was successful with two cases in hospital, while in the year following Schoeler (27) reports several successes. Since then the operation has been repeated many times, and though the cases are yet too few to admit of positive opinions among conservative men, it seems to have gained a definite place, and in a certain class of cases to be an acceptable substitute for enucleation. Without endorsing the enthusiastic Schweigger, who says (28): "The indications for enucleation will hereafter be confined to intra-ocular tumors and to eyes in which foreign bodies keep up a chronic inflammation," or Schoeler, who says (29): "All indications for enucleation, except malign tumors, are fulfilled by enervation," we may say with Williams (30): "Expectations of good results from this neurotomy appear to be theoretically reasonably well founded, and experience confirms them, but it is of too recent application to warrant us in saying positively that it will invariably prevent sympathetic ophthalmia."

The procedure certainly has this advantage, that if it fails to arrest the trouble, enucleation may be resorted to without any further disadvantage than may result from the delay, moreover, it is one which will in many cases be permitted where a proposition to enucleate would not be listened to, such is the prejudice in the community against the removal of an eye, even if blind and pain-

ful. The operation is quite simple. Some operators prefer to divide the internal rectus muscle, after making the opening through the conjunctiva at the inner side of the cornea, while others think it easy to dispense with this step. In case this is done, a suture is passed through the tendon of the muscle before its division, so that the divided ends may be united after the neurotomy is done and thus a divergent squint be avoided. The sclerotic being reached, a little dissection of loose cellular tissue with strong curved scissors enables the operator to reach and divide the optic nerve as in an ordinary enucleation. Then by strongly rotating the eyeball by means of a sharp hook, the cut optic nerve can be brought forward so as to be plainly seen, and the ciliary nerves which pierce the sclerotic at a little distance from it, may be leisurely severed, the dissection not being done in the dark, but under the eye of the operator. In some cases the optic nerve has been severed several millimeters behind the globe, so that upon rotation a considerably long piece was seen attached to the eyeball, and by removing this a gap was left in the optic tract, obviating the objection advanced by some that the nerves may reunite. Some trouble has occasionally been met with from hemorrhage into the orbit, causing protrusion of the eyeball and arousing fears of suppurative trouble, so that enucleation was resorted to (31). I do not find, however, any cases recorded in which this symptom did not give way without serious consequences. Warlomont, however, has devised an instrument (32) which he calls crushing scissors, by which the nerve is crushed before being divided, and claims that the hemorrhage is much less, and Dr. Henry Williams of Boston, who showed this instrument at the session of the American Oph. Society last year, writes me that he has found the hemorrhage less when these scissors were used.

Briefly stated, the points for and against the operation as a substitute for enucleation may be put thus: It leaves no deformity, does not call for the wearing of an artificial eye afterwards; will often be permitted when a proposal to enucleate would not be entertained; in many cases is effectual in arresting sympathetic inflammation, and in case of failure, does not prevent, but rather favors an enucleation subsequently, while on the other side, we find that it sometimes fails of its purpose and a subsequent enucleation succeeds; that valuable time may be lost and the enucleation come too late and this objection will restrict its application at present in careful hands to a limited class of cases in which delay

is of secondary importance. Where a foreign body is imbedded deep within the eyeball and cannot be removed, enucleation cannot be replaced by the new operation, nor will it apply in those cases where panophthalmitis is impending. This latter condition in a blind eye, and where sympathetic ophthalmia has appeared in the other organ calls loudly for enucleation and not for poultices as was the practice many years ago, when it was supposed that general suppurative inflammation was never productive of sympathetic trouble.

The subject of the lodgment of foreign bodies within the eyeball, and the procedures justifiable to remove them, has already been touched upon briefly; but I think the importance of the subject demands an allusion to the use of magnetism for this purpose which has been so much employed and written about during the past year. The permanent magnet of Gruening, described in the New York Medical Record, May 1, 1880, consisting of a magazine of bar magnets whose combined power is concentrated in a soft iron cap, to which these slender points may be attached, renders it possible for the surgeon to introduce, through a small wound, a magnetic point of considerable power, while an electro-magnet (like the one shown) gives, with some slight disadvantages, a marked increase of attractive influence. I will not weary you with the recital of cases in which foreign bodies have been removed from the depths of the eyeball by introducing through the wound of entrance or through a small wound made for the purpose these delicate magnetic points, but merely call attention to the fact that no less than seven such cases are recorded in a recent issue of one of the German monthly journals (33). I think, however, that the case of McHardy, of London, deserves a separate mention, for it is the only case on record where a foreign body has been drawn out of the vitreous chamber by the attractive influence of a powerful electro-magnet brought close to the cornea, *but not introduced within the eyeball*. When the connection with the battery was made, the patient complained of pain, which ceased on breaking the current; showing that it was due to the progress of the fragment of steel through the tissues; and within half an hour a sharp, irregular foreign body was actually drawn through the iris and through the cornea.

“But,” some of you may be prompted to ask, “would you remove or otherwise operate upon every diseased or injured eyeball

that you found slightly tender or painful?" By no means, for these reasons *alone*; but my suspicions would be aroused, and I would caution the patient never to go beyond the reach of surgical aid—as, for instance, on a long sea-voyage. Moreover, I would enjoin habits of observation regarding the condition and powers of the sound eye, so that its earliest failings might be noted, and a careful surveillance kept and condition recorded. When it became evident that sympathetic trouble was impending, each case should be treated in accordance with its individual peculiarities, but on the general principles heretofore given.

And now, lest some one may think that I have given undue prominence to the topic, or have spoken with the onesidedness of which the special practitioner is so often accused, let me close with an extract from the inaugural address of the present month before the American Medical Association, by its president, Prof. Hodgen, a broad, general surgeon, who, in speaking of surgical interference, says: "Sympathetic ophthalmia affords a striking instance of the results which may come from not recognizing a danger in season, or from a want of promptness in dealing with it."

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ESSAY.

NON-PHARMACOLOGICAL THERAPEUTICS.

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To treat of all the remedial agents not strictly medicinal that have been employed for the cure of disease and the relief of pain, and to try to explain their mode of action, showing in what respect they differ and in how far they resemble those that are properly called medicines, would far exceed the limit of this time and place. It is not even a very easy task exactly to define just what may be looked upon as a strictly non-pharmacological therapeutic measure, since in our works on materia medica the imponderable agents, as heat, light, and electricity, receive, if not the full attention they deserve, at least a very honorable share of consideration, and from those that devote themselves to their employment elicit interesting notice directly proportional to the frequency and the diversity of their application. It will do, then, to state that by non-pharmacological therapeutics I mean such measures in the hands of the physician as are not written for on the traditional prescription blank and sent to the apothecary for dispensation. Complex and numerous as are the substances prescribed by the pharmacopœia, so simple and easily applicable are these others, and they have the further advantage of cheapness, purity, and a tried and undoubted efficacy. Such measures as I have in mind are climate, spas, balneic institutions—either marine or inland—athletic and calisthenic exercise, just apportionment and proper selection and variation of diet, and spiritual, or rather mental, influences. Just how far the action of any therapeutic measure depends on the caloric, electric, or photic action it may have on the human economy it is at this time impossible to say with any degree of positiveness, but it is fair to assume, nay, it is

almost proven, that as the proper condition of heat and electricity, fairly balanced in its normal proportions in the body, constitute what we term health, so any disturbance in the equilibrium between these physical forces must necessarily constitute disease, either causative or resultant, and the final aim of medical treatment is to remove the disturbing cause and bring back the system to its normal physiological standard. But the proper condition of heat and electricity is brought about by the molecular changes of the particles that go to make up the animal economy, and any waste of force that takes place in this process is resupplied by elements of new force furnished to the system in substances possessing heat-producing power, food and air, or non-physical means capable of generating electric force. The matter given for this purpose has no importance so long as the matter is capable of producing the requisite amount and quality of force. Of all the physical properties pertaining to the body, it has by clinical study been fixed as an undeniable axiom that heat—that is, the existence of a proper amount of caloric force, or, in other words, temperature—is of the utmost importance to the condition of healthy life, and that any rise or fall of this body temperature is significantly indicative of a disturbance in the vital process, and that this disturbance is directly proportional to the deviation of the body heat from its normal state. How this change is brought about, whether through a chemical or physical disturbance, that is through a change from normal morphological tissue metamorphosis or by organo-electric disturbance, is a question which we, with our present knowledge of the inner animal organism, cannot answer. Many hypotheses have by as many theorists been propounded, and as various as are the causes assigned for temperature elevation are the drugs that have been used to correct the caloric disturbance. Febrifuges, antipyretics, sedatives, refrigerants, acids, and substances whose efficacy have not been capable of demonstration save on empirical grounds, have all been used to counteract pyrogenesis, and if the result of their employment has been a diminution of body heat, that was deemed satisfactory evidence that they were indicated by the circumstances and were the proper agents. The insufficiency of the explanation as to how they acted was not attended to, but they became the recognized remedies of all physicians and were constantly made use of. So-called thermal nerves and hypothetical inhibitory and moderating heat-centres, structures that thus far belong entirely to the domain

of speculative physiology, have been assumed to exist, and to be particularly influenced by the so-called antipyretics, for which also either a chemical or catalytic action has been claimed on a possibly existing pyrogenetic substance supposed to circulate in the system, but so long as these propositions are neither of them capable of positive demonstration, so long must we regard it as unscientific to entertain them. And the action of any drug given for the purpose of reducing the heat of fever being almost entirely at variance with the action of any other drug given for the same purpose, we cannot but become skeptical as to the rationale of their employment for this purpose. Thus, *veratrum* reduces temperature, but its influence is directed, nay, spent, almost entirely on the muscular structure (and the question has arisen, is muscle that tissue whence the pyretic process starts either by oxidation or in any other as yet undetermined manner). Quinine, on the other hand, is a febrifuge no less potent than *veratrum*, but quinine acts entirely as a nerve sedative. *Aconite* acts on the heart, weakening its contractions and decreasing arterial pressure, and is a very valuable drug, but *digitalis*, its direct physiological antagonist, is certainly as good, with as well founded a claim. So also the mineral acids are valuable medicines given for antifebrile purposes, but potassium or sodium nitrate, acting in an entirely different manner, are just as potent. How it is that such a large array of substances act each in a different manner and produce the same result, we must at present despair of explaining. The desired effect, however, in the treatment of fever is accomplished by all of them, and so long as it is attained we must remain satisfied, even if the mode of action of the drugs is inexplicable. It is one of the great triumphs of modern therapeutics that a method has been devised for the antipyretic treatment of febrile affections, which while it is simple and natural in its details, accomplishes its work in a manner perfectly comprehensible on physiological grounds, and safer, more efficient, and more under the control of the physician than any pharmacological treatment. I refer to the hydropathic method first made use of by Kaunitz in Germany, who, devoid of any medical knowledge, and incapable to explain scientifically the action of external applications to the body colder than the body to which they were applied. could not necessarily command the respect of the medical world, and was relegated to the position of a charlatan, which he undoubtedly

was, but when Currie at the close of the last century published his treatise on the use of cold affusions in typhoid fever, with the enumeration of the favorable results obtained by that method, there arose interest and research in the subject, and an adaptation of the method to various and many diseased conditions, until today no reasoning physician denies its efficacy, and the only explanation as to the infrequency of its employment may lie in the apathy of the physician and possibly the reluctance of the laity to submit to what seems to them a harsh and non-medical treatment of disease. It is proper to enlarge on the advantage of the treatment by external reduction of the body temperature. It must be stated that it accomplishes nothing more than just this: It withdraws heat from the periphery of the body, and does this without any primary influence on the caloric process or condition of the internal organs. But the cold bath or pack having terminated, an equalization of the temperature of all the tissues, peripheral and central, takes place by simple conduction, which of course lowers the inner heat in exact proportion to the amount of cooling that the outer parts have undergone. A complete equalization having been attained, it is necessary again to have recourse to a bath or pack, again to abstract heat from the skin and again to allow equalization to take place, and to keep this up until the thermometer in the rectum will indicate the normal standard. This in the treatment of fevers is all that we really have to accomplish to bring about satisfactory therapeutic results. The danger to the patient does not lie in the increased combustion and oxidation of the tissues, because if combustion were the source of the danger the free administration of hydro-carbons (which in their day have also been advocated, but did not fulfill the expectation in regard to them) would, by furnishing material for calorification, avert this danger. It is in the deleterious effects of the high temperature on the histiological structure of the tissues that the danger lies. The simple proof of this is afforded by the fact that fevers that are rapidly fatal are just those whose chief characteristic is an exceedingly high temperature. The destruction of tissue by combustion or otherwise, as seen by the excreta, or the emaciation is not comparable to such diseased conditions where the body rapidly wastes away, but life is nevertheless prolonged for a very long time. The cooling process therefore, applied to the exterior of the whole body in a manner thorough and complete enough to produce such an equalization of temperature that the thermometer will not

for hours indicate a body heat higher than the normal, is sufficient for the treatment of fever, and we may rest satisfied that the prognosis of such a case, uncomplicated by adynamic influences, can be looked on as favorable, and medication, except for symptomatic requirements, such as pain, insomnia, etc., is superfluous. Advocating the hydropathic treatment of fevers, I must say something as to the kind in which I have employed it, and the manner in which I have used it. As regards the first, I have used it in any case of pyrexia where I thought the parties interested were intelligent enough to follow out my directions, and not likely to blame the treatment if the disease *should* terminate in an unfavorable manner. Such cases of course being rare, it follows that I have not made as liberal use of it as I should like to have done, but in the few cases where I have depended on it for producing deferescence of acute fever I have not been disappointed. Thus in scarlet fever of a severe type the child (four years old) having a temperature of $105\frac{2}{3}^{\circ}$ on the second day of the disease (when first I was called), foetid breath, deeply infiltrated diphtheritic throat, perfectly dry skin, and almost anuria, was immersed in a bath of 100° F., and kept there five minutes. The temperature of the child in half an hour had been reduced $2\frac{2}{3}^{\circ}$; the temperature of the water at the termination of the bath was 95° . After an hour the bath was repeated, producing a further reduction of $1\frac{3}{8}^{\circ}$, and causing also a quite refreshing sleep of an hour's duration. On awakening, the temperature of the child being $101\frac{1}{2}^{\circ}$, the child was again placed in a bath of 98° , the water rapidly cooled with ice to 70° , and the child wrapped up in dry sheets. After an hour the temperature being taken it was found to be $99\frac{1}{2}^{\circ}$, and stayed so for twenty-four hours. For the succeeding three afternoons the temperature, which then always indicated a rise of from $1\frac{1}{2}^{\circ}$ to 2° , was by a bath such as the last one, reduced to the normal, and would stay so until the succeeding noon, but after the third day the child was well, the pulse was strengthened and slowed. the respirations slowed and deepened. Diuresis and profuse diaphoresis was established by this means, as were sleep and appetite, and the throat symptoms abated with a most gratifying rapidity. Now, I do not mean to say that reduction of temperature by baths will counteract the specific action of the scarlatinous poison, neither will I assume from the experience which one single case of scarlatina has given me that in all like cases the same treatment is the proper and only proper one to be applied, but the results

that I have obtained in this one case thoroughly corroborating the statements of those that have made general use of this mode of treatment is, to say the least, suggestive, and worthy of recommendation. So also in pneumonia I have followed the same plan, with the same happy results. All the reports of observers in large clinical wards where hydropathy has been extensively applied, such as Hahn, Ziemsens, and Leichtenstein, assert positively that the rate of mortality, the duration and severity of the disease, has been by this method materially lessened. In making use of the bath, wet pack, or affusions in febrile affections there are several points that require strict attention to ensure success : First, it is imperative that the patient should be under the complete control of the physician and in the hands of an untiring and devoted clinical attendant ; the fever that shows the highest thermometrical altitude is the one mostly benefited by it. The application ought never to be matutinal, nor indeed very early in the afternoon, but when it is commenced should be kept up with steadily until defervescence of the fever is complete. The condition of the patient as regards his general physical condition has no bearing on the matter. Nervous people find that the transitory stimulation which accompanies the bath is followed by a feeling of profound and very comfortable sedation, while the robust and plethoric are by increased peripheral hyperaemia, which follows as a secondary effect of the cooling, most signally benefited. But it is not in affections that are essentially febrile that the benefit of the treatment by temperature is alone beneficial ; it is not too much to say that every disease without exception, unless it be one of slow organic change, derives more or less benefit from it. Neither are the effects that a reduced temperature produces on the nerves or vessels alone attainable by thermal irritation. Mechanical and galvanic, and, in part, also, chemical means may produce the same ends. (By such I mean massage, the battery current, direct or induced, and other means of a like nature.) The effect of the application of any thermal irritation is first that the peripheral vessels are dilated by the cold application, and a hyperaemia supervenes, which in abstracting blood from the central organs causes an anaemia of the same, or there may be caused by the same application a vascular spasmodic contraction in the parts to which it is applied, causing complete local stasis. Why these opposite conditions should take place at different times by the same kind of irritation we cannot explain; what we do know is that the

temperature of the skin is dependent, in a greater or less degree on the circulatory condition of the same, and that it is more under the control of its vascularity than of the surrounding medium. If this holds good for the exterior of the body it does so far more completely for the inner organs. In them the circulation must alone determine their temperature and its variability. It is the blood current, its quantity and rapidity, that influences the caloric condition of the system; if, however, the blood current is directed by external irritation of cold, etc., "from the central organs to the periphery of the body, it follows that the inner organs are cooled, and the deleterious effects of an abnormal heat are averted. Buch and Fleury have of late made some exhaustive experiments on the subject of peripheral body heat, and the influence of hydratic measures on central organs, and the former has found that primarily the very opposite of that here spoken of takes place; in other words, if a limited area of skin is cooled by a local bath the adjacent skin becomes warmer, and again if a limited space is heated by extreme warmth the neighboring skin is cooled, which is explained by the fact that in the one case a collateral hyperaemia, in the second a collateral anaemia, takes place. Fleury has established the following facts: That a rapid and transitory cooling of the skin produces no changes on the body temperature whatever, but that a slow and continuous cooling of the skin is followed on its cessation by a rise in its temperature to a degree higher than it had been before the application, and that the inner organs, particularly those inner organs nearest to the cooled area of skin, become colder as the skin gets warmer. This fact is of therapeutic value as sanctioning and commending the practice to apply local heat-lowering bodies in inflammations of an acute and local character. Esmarch and Schlikoff observed in patients with large abscess cavities that by applying ice bags in their neighborhood the temperature (previously registered) of the cavity would sink 2° C., but when the ice bag was removed and the temperature of the skin rose, it was to a point higher than had been that of the cavity before the application, and that of the cavity sank 2° C. lower than the point it had touched while yet the ice was on the body. The question of what influence local heat reduction may have on tissue change is as unanswerable as the question, what effect has accelerated or retarded tissue change on the prognosis of any disease. Thus Winternitz found that striated muscle was reddened by the local

application of cold water, and claims that the muscular hyperaemia counteracts the effect of the cold, and is evidence of increased cell action, but he concedes that if a septic substance circulates in the blood the effect of the septic matter on the tissues is lessened by the cold, as he found it almost always to be increased by heat. To speak more directly of the effect of cold applications on distinct organs, I will mention the ice cap in cerebral inflammation. The vascularity of the intracranial tissue is such, and its source of supply so great and varied, that any application of cold to any one part of the skull can have but very little influence on the brain, where the distribution and inosculation of the vessels must continuously keep up an equalization of temperature, but the meninges are more accessible to this external influence, and the ice cap, or irrigation continuously kept up, has proved of the utmost utility in the management of this formidable disease. The results obtained by the hydropathic method in the treatment of true croup are no less gratifying than those obtained in pure fevers, but the local application of cold must not be continued too long, and it is the reaction produced by the removal of the cold application that produces the curative result. The first effect of the cold application to the throat is to produce local anaemia at the site of the application, hyperaemia of the deep structures ; but the removal of the cold is followed by a long continued dilatation of the peripheral vessels and consequent anaemia of the inner parts. One of the greatest requirements in the treatment of croup is to avert the danger of paresis of the aryo-glottidean nerves. This is best done by reflex thermal irritation. Bartels, of Kiel, has repeatedly used irrigation of the whole body in dyspnoeic diseases, finding that when the reactionary integumentary congestion set in the congestive stasis of the lungs would abate and the patient be relieved. In acute pleural inflammation, in hæmoptisis, pneumorrhagia, and peritoneal inflammation, I have myself made use of the local application of cold nearest the side of the affection, and always with the happiest results. In these cases I have used wet cloths of a moderate temperature and on them have placed the ice bag. The gradual cooling that thus takes place has, I am sure, not only been sufficient to remove the pathological condition, but it has in an eminent manner acted also as a marked sedative. Only in regard to pneumorrhagia, I might state that passive bleeding might be benefited less than where it is caused by erosion of vessels, as in phthisis or the like. Of no little import on the thera-

peutic result is the effect of cold on the integumentary respiration, or gaseous diffusion taking place through the skin. The quantity of this gaseous exchange depends undoubtedly on the amount of blood that circulates through the integumentary system in a given time, and this circulation depends on the vascularity, *i. e.*, dilatation of the capillaries, the contractility of the fibrous skin structure, and the cardiac impulse. All methods of cold water application further this process. Röhrig has demonstrated beyond all doubt that the integumentary osmosis is an important factor in the vital process, and that the skin is not only capable of absorbing gases from the air when dry, but that the wet skin has the same capacity, and although water and saline solutions are not taken up as such, that they are absorbed when applied in the vaporous or atomised condition. To this penetrability of vaporous substances are to be ascribed the therapeutic effects of medicated steaming of the skin. All inflammatory processes of the abdominal parietes or viscera, or intra-pelvic affections, acute or chronic, are benefited by the same plan of treatment. It is necessary in such cases to envelop the whole trunk with wet cloths, which must be continually cooled, and if this is done with sufficient perseverance the inner organs are cooled to such a degree that the inflammatory congestion will be entirely removed. A most astonishing but repeatedly observed, and conclusively proven result of the hydriatic method is the effect it has on hypermetropics, whose visual defects are due to lessened accommodative power, and are therefore forced to use convex lenses. In such, Winternitz found that after protracted external treatment with cold water for other chronic diseases the glasses became superfluous. The explanation of this may be sought in the effect that cold has on muscular fibres anywhere increasing their contractibility producing chronic spasm, if the temperature is sufficiently lowered, and this of a quasi permanent character. Peristaltic action may be stimulated by frequent application of cold of short duration, while diarrhea is as surely benefited if it is applied in a more protracted manner. An important consideration is the propriety of the use of the Sitz bath for any disturbance in the sexual organs; where the desideratum is to increase the amount of blood in the parts, and thus promote tissue change, they are indicated. These results are of course the secondary result, the first effect of the bath being of a very opposite nature, hence where the source of the trouble is attributable to innervation, anaemia, tissue-relaxation, retarded

functional activity, or hindered tissue-change, where the trouble itself is paresis or paralysis of the sphincters or of the detrusors, where amenorrhœa or impotence exists, or whether the derivative effect is sought to draw away the blood current from superior organs. Sitz bath is clearly indicated; and as distinctly interdicted where local congestion exists as in meno or metrorrhagia. But the baths should be very cold and of short duration, as if they are protracted they are likely to prevent the compensatory circulatory reaction and cause depression and retardation of local nutritive changes. A word as to the use of warm water, such as vaginal injections, which have of late become the fashionable treatment for uterine catharrhal and hæmorrhagic affections. Physiological experiments have settled it that the vascular contraction of the tissues produced by hot water is followed by a complete and enduring relaxation of the same, which seriously affects the therapeutic process for a very long period. While, therefore, hot water may do good as hæmostatic in active hæmorrhage, the propriety of its employment for passive discharges is open to serious doubt. As regard the effect of water externally applied on the eliminative system, it may be here stated that the acidity of the urine is lessened, the sulphates diminished, indicating increased biliary secretion, phosphates increased, indicative of reduced nerve irritation, and the total solids reduced, representing the arrest of albuminoid decomposition, and albuminuria is often entirely relieved. This subject of non-pharmacological treatment of disease cannot be exhausted by a paper of this limited scope. All the other above mentioned measures deserve the full attention and experimental application that the results obtained by physicians that make large use of them entitle them to. I must remain satisfied with having in an incomplete manner simply called attention to one measure which has so many meritorious claims on the reasoning physician.

ESSAY.

THE INFLUENCE OF SUDDEN ALTERNATIONS OF TEMPERATURE AND HUMIDITY UPON THE RESPIRATORY SYSTEM.

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When subjected to excessive degrees of heat, the system has taken the initial step towards an inflammatory or congested condition.

Inflammation in any part may be produced by such an application of heat as affects the constitution generally and creates arterial excitement and diaphoresis, followed by a sudden diminution of temperature. Cold explained philosophically is a negative, an absence of heat. In common terms when the temperature is lessening we speak of increasing cold.

Cold so applied as to act constitutionally may inflame an organ by destroying the balance of circulation, by interrupting or suspending the functions of the skin. The cutis-vera is largely composed of lymphatic vessels and capillary nerves and blood vessels; its whole surface is a capillary network. "Immediately beneath the skin over the whole surface of the body, there are a multitude of little glandular bodies called perspiratory or sweat glands. Each gland consists of a minute cylindrical, spiral duct which passes inward through the epidermis and terminates in a globular coil in the deeper meshes of the cutis-vera. The opening of the duct is called the pore. This aperture is oblique in direction, possesses the advantage of a valvular opening, preventing the ingress of foreign injurious substances to the interior of the duct or gland. These glands coming in contact with the capillary blood vessels, receive a watery fluid (the perspiration) from the blood." The surface of the skin possesses the power of absorbing both liquids

and vapors. Of the external conditions which modify the quantity of perspiration, the condition of the atmosphere is most important. Thus in warm air the activity of the cutaneous circulation is increased, which increases the perspiration, while cold air has the opposite effect. Again dry air increases the perspiration while damp air diminishes it. Warmth acts by increasing the vascular action through the skin. On the other hand cold diminishes the vascularity of the skin and dampness of the air impedes evaporation. These important functions of the skin suggest the vital necessity of clothing adapted to the temperature and other meteorological conditions surrounding us. There is prevalent a great error in regard to the prevention or cure of our catarrhal diseases by confinement in rooms of high temperature, which instead of being a preventative is a fruitful source of it and many other pulmonary diseases. Those who are most sedentary in their habits are most liable to pulmonary tuberculosis. Dr. Parrish having no faith in remedies in this disease threw them aside, saying that "vigorous exercise in the open air is by far the most efficient remedy in tubercular disease. It is not however that kind of exercise usually prescribed for invalids, an occasional walk or ride in pleasant weather and strict confinement in the intervals, but daily and long continued riding on horseback or in carriages over rough roads, is perhaps the best mode of exercise. Nor should his comfort be scrupulously studied.

"Though I would not advise a consumptive patient to expose himself to the severest inclemencies of the weather, I would nevertheless warn him against the dread of taking cold on every occasion when the temperature may be low, or the skies overcast. We may be told that the patient is too feeble to bear the exertion, but except in the last stage, when every remedy must prove unavailing. I believe there are few who cannot use exercise out of doors, and it sometimes happens that they who are exceedingly debilitated find upon making the trial, that their strength is increased by the effort, and that the more they exert themselves the better able they are to support the exertion." Louis was of the opinion that the lymphatic temperament predisposes to phthisis, but it is evident that an attempt to distinguish the different temperaments can lead to no definite conclusions. In estimating the amount of influence which climate exerts in the development of phthisis we must rely wholly upon statistics. Valuable light has been thrown upon this subject by statistical reports of American

and British surgeons who have been stationed in various latitudes and climates. There seems to be quite a difference in the prevalence of tuberculosis along the same parallels of latitude. The West Indies are more favorable to the production of phthisis than the East, according to these reports. In the army in England the number of these patients was six and one-half in every one thousand. In the West Indies the number was twelve in one thousand; in the Bermudas nine. In the Mediterranean, the average numbers of these cases is six in one thousand. In Ceylon and along the Bay of Bengal it is seldom known. And the least number of cases in proportion to the inhabitants is found in sections of *our* country remote from the Atlantic seaboard and the great lakes. Thus according to statistics which we think may be regarded as reliable as any, the regions most distant from great bodies of water are most favorable for the residence of those who have the tubercular diathesis. The great inland seas or the Atlantic ocean upon one side and the continent upon the other, certainly cannot be called a favorable location; but so far away from them that when the wind changes, there shall be no change as a matter of course in the weather.

Here a change of wind implies a change in the barometer and thermometer. For a truthful and graphic description, I would refer to Mark Twain's article, written some time ago, upon New England weather. These intermediate States would seem to be Colorado, Utah, or Kansas, which are becoming more the favorite resorts of invalids. Minnesota being found too far north and Florida too far south except in midwinter. Very few who find it needful to seek another climate from ours can afford to migrate to Florida every Fall, keeping with the sun, and return with his return in the spring. To those localities, then, we should send consumptive patients, rather than to those which they have formerly visited for the improvement of their health, send them where permanent homes can be established. But it is not under all circumstances best to advise a removal from home in order to obtain the benefit of a more equable climate. The stage of the disease during which such a removal will prove most beneficial, is its formative one, that stage in which other remedies have the most beneficial effect.

The laws of health and the conditions by which it can be maintained, are yearly better and better understood by the profession

and by the people. Each year is added to the list of remedies, what may truly be termed specific.

But better than specifics will be the general diffusion of hygienic knowledge among the people—definite, minute knowledge.

The people are already somewhat instructed, those who read and think for themselves, as to the theory of germ poisons, the malarial, the typhoidal, the zymotic, and the Liliputian bacteria, so minute that it is hardly within the field of microscopic vision, and best seen by the eye of faith, the deadly nature of sewer gas, etc., but we think hardly enough prominence has been given to the fact so well known but lost sight of in the study of new theories of disease that very many of our inflammatory and most fatal maladies have their origin in causes which are strictly climatic. Diseases which it is our mission to grapple with and overcome, do not always approach us from the same direction.

It is noted that the meteorological condition of the warm months are favorable to the recovery of, or mitigation of chronic diseases of the respiratory system. Acute diseases of these organs are not frequent during the summer months, but are succeeded by those of the gastro-intestinal or hepatic organs. This order in this climate is very noticeable. Among the hills of my section of the State, as the summer approaches, pulmonary cases which had a lingering or relapsing character, feel at once the most curative and beneficial effects. Health comes to the invalid with the coming of the birds and the flowers. The early summer comes to such as a blessing. It acts upon ulcerated and inflamed pulmonary tissues and membranes like a specific medicine.

We find but little use for the stethoscope and percussion, and the consumptive begins to regain something of his wonted strength and vigor.

Also, at this season of the year, we have to deal mostly with the sequelæ of thoracic diseases; the acute inflammation has passed and we are treating its effects. The order of succession of diseases is remarkable. Each season, with its meteorological changes originates the diseases peculiar to it. The colors and outlines of the ladies' hats are changed with no more regularity.

Encampments have been broken up from the exposure the men were subjected to, that of sleeping in tents upon low sections of ground. The high temperature of the early autumn days, alternating with the sensation of low temperature and humidity of the night, has caused the headache, the cough, languor, loss of appe-

tite, the malaise, and succession of symptoms which we so quickly recognize as the announcement of typhoid pneumonia. The tent, at night, is but the slightest protection to the chill fogs of the low lands, which at noon is a hot vapor, intensified by the heavy regulated dress. The majority of these persons who practice the annual military exercises, are those of indoor occupation, and have been accustomed to dry sleeping apartments with a temperature and humidity whose range from midday to midnight is comparatively slight. Those who are more exposed in out-of-door occupations may escape with impunity. Here a potent cause is the sudden alternation of temperature and humidity, *interrupting the vital function of the skin*. During the cold months, when decomposition of animal and vegetable matters is suspended by frost, diphtheria is the most prevalent, and when the heats of summer come again, when putrefaction is the most rapid, when waste matters are filling the air with their foul odors, then we notice that diphtheria has nearly left us but to return again with the chilly months.

It seems that those families most exempt from diphtheria, pneumonia, and the various diseases of the respiratory system, are those who live in dry houses, who keep but a moderate temperature, who have their day rooms of nearly the same degree of warmth as the sleeping rooms, and who give the most attention to systematic ventilation. This allows of the escape of respired air and excessive moisture, and the ingress of a pure atmosphere. The children are dressed according to the weather, and not wholly according to the dictates of fashion.

If the temperature outside is at zero, the family do not have rooms at a thermometry of eighty-five or ninety degrees, charged with steam. These we believe to be the best possible conditions for escaping the thoracic diseases of the winter months. Notwithstanding a degree of tolerance to atmospheric changes which the ignorant acquire, mortality among them and their children is very great. We find them in rooms many times heated to near 90 degrees, the whole family in profuse perspiration. We are reminded of the Russian hot steam bath, or the most suffocating days of August, or of the Inferno.

The windows are nailed fast, and perhaps have not been opened for years. Quantities of water in form of steam are being absorbed each day by bed clothing and walls of the tenement.

The children may sleep in rooms remote from this apartment,

but which have absorbed moisture continually. Here we have the chill and dampness of a cellar, and here we will find the different forms of croup, croupal diphtheria, pneumonia, and the whole list of thoracic diseases.

Here is work for the Sanitarian. With the earnestness of a Moody preach the gospel of health to the people, and how to preserve it. The field is a great one and the laborers are few. A good illustrated text placed upon the wall of every home in the land might read. "Keep your house dry by ventilation, and at a moderate temperature."

No one catches a cold without first having subjected himself to a comparatively high temperature.

We are reminded here of frequent army reports during the last war, of the national forces being well provided with flannels next the skin, that this recommendation which was made early was generally observed. That by this protection from the chills of the cold months soldiers thus provided escaped pneumonia and bronchitis to a much greater extent than those of the opposing forces not so fully protected.

The various phases which pneumonic diseases assume sometimes are interesting. The stethoscope and percussion reveal to us certain obscure forms which any other mode of exploration would fail to discover. I have in mind a case of typhoid-pneumonia, but with diarrhœa and the ordinary train of symptoms, with only the slightest cough, but no dyspnea, no pleuritis, no symptom pointing to the lungs as the seat of a serious complication, yet upon a careful examination, we found the right lung in a state of hepatization, or at least of solidity. Was entire occlusion of air save at the infra clavicular region.

The case is one which illustrates the insidious invasion of a typho-pneumonia in the latter stage of a typhoid-fever. The patient does not help in the diagnosis.

His sensibilities are blunted, he has no anxiety. His mind is in a state of blissful indifference.

But these witnesses which we examine so closely, and all of them, seldom mislead us, but point, when well interpreted, to a truthful diagnosis.

ESSAY.

TREATMENT OF THE THIRD STAGE OF ABORTION.

J. H. GRANNISS, M.D., SAYBROOK.

I am led to select this subject, certainly not because I expect to enlighten this body, nor do I expect to enunciate any new therapeutic or pathological principle in regard to the treatment of the third stage of abortion, but rather to add my testimony in favor of certain plans of treatment which I believe to be greatly in the interest of the patient, and practiced by a majority of the most advanced and conservative practitioners of to-day. My belief in the propriety of considering this subject on this occasion was strengthened at the meeting of the American Medical Association in New York last June, by the discussion which followed the reading of a paper on this subject by Dr. J. T. Johnson, in which the same ground was substantially taken. Much to my surprise, a number of the older and perhaps wiser heads of the profession took the ground that the expulsion of the placenta (after expulsion of the foetus and closure of the os uteri) should be left to nature, mechanical interference being allowable in only exceptional cases, if at all. That the attention of the profession has been called to it is proved by numerous society discussions, clinical lectures, and papers published within the last three or four years, notably the paper by Dr. W. T. Lusk in *Medical Record*, February, 1878, in which the management of abortion is considered in detail. Certain untoward experiences in my own practice have also helped determine me to this selection, the most prominent of which was as follows:

In the evening of May 9, 1879, I was met on the street by Mr. C., who informed me that his wife, a multipara, had aborted the day previous, but no after-birth had come away. I told him that it would be neces-

sary for me to see her and deliver it. On arrival I found her feeling quite comfortably, having expelled a three and one-half months foetus the day before, since which occurrence she had flowed but moderately and suffered no pain. On examination I found a tightly-closed os uteri, into which I could not insert my finger without producing intense pain. I proposed to give an anaesthetic, dilate the os, and remove the placenta, but the patient so strongly objected to having an operation that I reluctantly consented to wait for nature to expel the uterine contents.

During the following three or four weeks the patient, in spite of my remonstrance, left her bed and assumed partial control of her household duties. I visited her two or three times a week. A neighboring physician of larger obstetric experience than mine was called in and fully justified me in pursuing the course I did. Ergot was administered in moderate doses once or twice daily. Hemorrhage was moderate, at times ceasing entirely for a few hours. Late in the afternoon of June 4th I was called suddenly to the bedside of my patient, and found that she had been taken suddenly with profuse flooding and had already become almost exsanguinated. I immediately tamponed the vagina very carefully and thoroughly, stayed at the house all night, gave her stimulants and liquid nourishment as often and in as large quantities as her stomach would bear them.

In the morning on removing the tampon the placenta was found in the vagina. The patient made as prompt a recovery as could be expected under the circumstances, and has remained well since.

In other instances I have been called to prescribe for the hemorrhage following an abortion, when the patients have informed me in the most positive manner that the after-birth had come away, but after a day or two of unsuccessful treatment the placenta or portions of it have been found in the vagina on removal of the tampon, or partially or wholly detached in the cavity of the uterus.

Now, I doubt if any member of this society would, if in attendance on a case of abortion, leave the patient till the uterus was emptied of its contents. If within a reasonable length of time after the expulsion of the foetus the placenta should fail to be expelled, he would proceed while the os was still open to remove it by some mechanical means, either his finger, which I believe to be preferable, or some form of placental forceps, except perhaps when the abortion occurs in the earliest few weeks of gestation. But if, as not unfrequently happens, expulsion of the foetus has occurred twenty-four or forty-eight hours, or even a week previous to the visit of the physician, the placenta is still retained and the os tightly closed, what is to be done? The ques-

tion how long is it safe to leave a placenta in the uterus is, I believe, an unanswerable one. So long as it remains the woman is liable to suddenly occurring and severe floodings, which may be so severe as to terminate her existence; at least will certainly retard recovery. Septicæmia may develop at any time, which if not soon stayed places the patient in imminent danger. On the other hand, patients have expelled after-births after two or even three months' retention, with but slight labor pains and moderate flowing.

However, in view of the possible dangers, ought not measures looking to immediate removal to be adopted? It seems to me, that as a rule they should. Different classes of cases demand different treatment, and yield results more or less speedily.

An arbitrary classification is of course impossible, but for convenience of consideration we will make six classes:

First—When there is sharp flooding when we are called.

Second—Hemorrhage is moderate.

Third—No hemorrhage.

Fourth—There exists, or has existed, pelvic inflammations, peritonitis or cellulitis.

Fifth—Putrefaction has commenced, and septicæmia symptoms are displaying themselves.

Sixth—Small portions of placenta are still attached to the walls of the uterus, causing a more or less constant flowing and frequent slight spurts of hemorrhage.

In the first class, an immediate use of the tampon is of course called for. On its removal, in most cases, the placenta is found in the vagina, or the cervix is so much dilated as to enable the physician to introduce one or two fingers into the uterus, when by depressing the fundus with the free hand he can separate and deliver. If sufficient dilatation has not occurred a second or third application of the tampon will almost surely accomplish it.

The treatment of the second class is the same as that of the first. The result, however, is apt to be less speedily obtained, as the flowing may not be sufficient to dilate the cervix and peel off the placenta.

In either of the above named classes if repeated trials of the tampon fail, then an anaesthetic should be administered, the cervix dilated, and the uterus emptied.

In the third class, that with no hemorrhage, where probably the placenta remains entirely attached, if the attendant is within

easy reach of the patient we can afford to await developments, but situated as many of us are in the country, where hours rather than minutes may elapse before reaching the patient, without having any experience in such a case, I should be inclined to adopt a course as follows: First, introduce a tampon once or twice for the purpose of softening the tissues of the cervix and rendering it more dilatable; then dilate and deliver as before. Though at a meeting of the New York Obstetrical Society, held Feb. 5, 1878, in answer to the question by Dr. Pooley, "In cases of early abortion if the placenta is retained after expulsion of the foetus and there is no hemorrhage, how long is it safe to wait before removal of the placenta by artificial means?" Dr. T. G. Thomas is reported to have said, "This is one of the knottiest questions in obstetrics," and again, "under such circumstances it is no easy matter even for an expert to dilate the cervical canal and remove the placenta." The argument against immediate removal is that so long as there is no separation of the placenta there can be no danger either from flooding or septic absorption, but in answer it is but fair to say that in the long continued absence of the physician sudden and dangerous flooding may occur rendering the patient more liable to septic influences than the manipulation necessary to immediate removal.

The fourth class presents a third factor rendering manipulation extremely dangerous; even the tampon is to be withheld unless absolutely demanded to check hemorrhage, and the patient must take her chances with opiates to soothe the pain and accompanying nervous disturbances, and hot disinfectant vaginal injections.

When putrefaction of the contents of the uterus has begun, constituting our fifth class, the indications are certainly clear to remove the cause. In Dr. Lusk's paper referred to above he quotes, I think, a German authority for saying that when putrefaction has taken place the os uteri will almost invariably be found dilated, which is certainly a fortunate circumstance as the speedy removal of such an offending body is of the utmost importance; after which the case must be treated on general surgical principles; the uterine cavity kept cleansed with disinfectant solutions, quinine administered, nourishment and stimulants as the case may require.

With regard to the sixth, and last, class I have only to say that the same small particles of placenta should be removed by the dull wire curette. This is an operation which is perhaps best left

to the specialist, but should the patient be so situated that she cannot consult one readily, I can see no reason why the careful general practitioner may not be trusted to undertake it. In my limited field of observation I have not as yet had occasion to use the instrument, but should occasion require I should make the attempt.

With regard to the use of ergot in these cases, my experience leads me to believe that it should only be given when the cervix is fully dilated, in which case it is usually easy to separate the placenta with the finger, making its use unnecessary. The propriety of the use of this drug in cases of abortion at the second or third month has lately been questioned by Dr. E. Noeggerath, of New York, as I think justly. His theory is that it contracts the fibres of the internal os and retards the expulsion of the foetus. This objection seems equally applicable to the expulsion of the placenta. Should inertia of the uterus occur its use is of course indicated, but in inertia it is usually easy to introduce the finger and separate the placenta, after which, in any case, ergot acts admirably in checking undue hemorrhage.

Thus, gentlemen, I have tried to sketch briefly, though imperfectly, the treatment of the third stage of abortion, or rather, as perhaps this paper should have been entitled, the neglected third stage of abortion. I am well aware that many will criticise the ground taken, saying that it is not giving Nature a fair chance. To this I would reply that Nature in all probability never intended that an abortion should occur, and therefore is but poorly prepared for its occurrence. Moreover, the measures recommended but assist and hasten Nature in doing what must be done and rarely result in any injury to the patient, whereas when Nature is left unassisted the patient is many times drained or poisoned to an irreparable extent.

ESSAY.

CLINICAL OBSERVATIONS ON THE TREATMENT OF LACERATION OF THE CERVIX UTERI BY OPERATION.

BY MATTHEW D. MANN, A.M., M.D., HARTFORD.

The discovery by Dr. T. A. Emmet of the hitherto unrecognized importance of lacerations of the cervix uteri, may be justly classed among the great discoveries which have made the American School of Gynecology so famous. It must be put in the same category as Sims' revelations in the matter of Vesico-Vaginal fistula, Hodge's invention of the pessary which bears his name, McDowell's brave introduction of ovariotomy, and Battey's startling operation. All these discoveries mark eras in the treatment of uterine and ovarian diseases.

This discovery of Emmet's has always seemed to me to corroborate in a certain degree the views so strongly urged by Dr. J. H. Bennett of London, in 1845. He attributed a large part of uterine diseases to ulceration and inflammation of the cervical portion. Had he only gone a step further and showed the true cause of the inflammation and "ulceration" as we now have it, gynecology would have been advanced twenty-five years at least. So near do men often come to, and yet fail of making great discoveries.

In an operation comparatively new, there must still be some unsettled points of procedure. But more interesting than these points is a consideration of the results achieved; for it is by them that we must ultimately decide upon the worth of any new recommendation. To these points, the methods of procedure and in particular the results, both primary and secondary, then, I ask your attention.

My object can best be attained by a careful relation and consideration of cases. To this end I propose to give in brief, an

account of all the cases in which I have operated during the last two years. Previous to that time I kept, I regret to say, no records of my private cases, and my dispensary book which contained the records of several thousand uterine cases, I was unable to get possession of. A few of the more important previous cases are still fresh in my memory, and to them I shall allude, as they may serve to illustrate some important point. The number of cases seen in all during the last two years is 34. Only one-half of these submitted to operation, and as one was operated on twice, (case 6) there were in all 18 operations.

CASE I. MRS. W., æt. 40. 2 children. Had suffered for a long time with "falling of the womb," back-ache, and inability to walk or stand for a long time. Great deal of dyspepsia, and a species of chronic diarrhea. She was in the poor-house in New Haven under the care of Prof. White, and a more unpromising subject could not well be found. On examination, I found the womb very low in the pelvis, greatly enlarged, and a bilateral laceration of the cervix, the lips being very much swollen, eroded and everted, rather soft than hard. The fundus lay forwards, and was heavy and congested. The perineum was ruptured to the sphincter and the anterior and posterior walls of the vagina prolapsed.

I operated Feb. 11, 1880, at the Poor-House, before the class of the Yale Medical School. The patient being etherized, was put in Sims' position on a table in a good light. A large Sims' speculum was introduced and the parts exposed. After denuding with scissors, as advised by Emmet, the parts were brought together with nine silver wire sutures, these being twisted and laid down against the cervix so as not to irritate the vagina. Immediately after the operation the sound passed into the uterus $5\frac{1}{2}$ inches.

The patient did well; the stitches were removed on the fourteenth day and perfect union found. A week later I restored the perineum with good results. At that time the uterus was reduced to $3\frac{1}{2}$ inches; still anteverted, but much higher in the pelvis.

After this the patient improved slowly, wore an anteversion pessary for awhile with some benefit, and recovered to a great degree from her dyspepsia. She was a chronic grumbler, and seemed not to desire to get well; and I understand that she recently applied for treatment at the New Haven Hospital in nearly as bad a condition as before.

Result. Here the circumstances were all against a cure, and although she received some benefit, still it was not nearly so great or so lasting as it might have been had she been differently placed. The reduction in the size of the uterus was certainly very marked.

CASE II. MRS. C., æt. 30. 2 children; the youngest 8 years old. Has had one abortion since. During her pregnancy she suffered greatly

from nausea and vomiting. Since then she has had frequent attacks of vomiting, coming on almost every morning. She has also been troubled with a dry hacking cough, without any discoverable throat lesion to account for it. I saw her in consultation with Dr. J. Campbell Jr., and advised an operation and a course of hot water douches and application of iodine by way of preparatory treatment. I operated February 12th. Six stitches were introduced, and the patient ordered to stay quietly in bed. This she did not do, and when I came on the tenth day to remove the stitches I found her sitting up. Perfect union was however obtained, down to the os, and the cervix looked like that of a multiparous woman.

The anteversion still persisted. For a time she wore a pessary with great benefit, and I understand that she is now in very good health. At the periods there is sometimes a little vomiting, and occasionally a slight cough, otherwise she is well.

Result. In this case, we may, I think, safely put down the result as a cure.

CASE III. Mrs. S., æt. 45. Married 27 years. 6 children, and 4 abortions. Last pregnancy resulting in a living child, was nine years ago. For the last fifteen years she has been "very wretched and miserable." For ten years has been treated for womb trouble, principally "ulceration." For a number of years she has suffered from frequent attacks of nausea and vomiting. These attacks have come on more and more frequently, until they have been as often as twice a day. They were accompanied by severe pain in the stomach, and finally led to the diagnosis of cancer of the stomach. For many years she has had excessive flowing at the periods, which of late have been extremely bad and long continued. She has also suffered from attacks of faintness and irregular action of the heart. An examination showed the uterus to be greatly enlarged, in position, and freely moveable. The cervix was found to be lacerated bilaterally, and greatly enlarged and hardened. Around the os was a large eroded surface the size of a silver dollar. When she came to me she was flowing so severely that the blood had run down into her shoes, notwithstanding a sheet used as a napkin. I first scraped out the cavity of the uterus with the eurette, and applied Tr. Iodini. This stopped the flowing, but so greatly was her strength reduced by the excessive loss of blood and the vomiting, that it was nearly three months before I could get her up and out. This I did by the aid of beef's blood injected daily into the rectum, tinctures, hot water injections, etc. Finally she was strong enough to bear the operation, which I performed March 10, 1880. Eight stitches were introduced, and perfect union secured. After this she improved very rapidly, and soon returned to her home in the country. Since then she has been nearly free from her attacks of pain in the stomach, nausea and vomiting. After a time the flowing returned, and I am now

awaiting an opportunity to again use the curette and follow it with nitric acid. She is however well enough to be able most of the time to stand behind a counter for ten or twelve hours a day.

Result. Great benefit to all the symptoms due directly to the laceration.

CASE IV. Referred to me by Dr. McKnight of East Hartford, Mrs. B. aet. 29, 1 child 7 years old, and 2 abortions since. She states that she has been sick ever since the child was two weeks old. At that time she lifted the child and felt as if her insides were falling. This was followed by numbness in the lower limbs, pain in the right side, worse on standing. She menstruates every two weeks for four or five days, at which time she has severe pain, worse on the first day. Has profuse constant leucorrhœa, stringy and bloody, is unable to walk except short distances. Her eyes also troubled her very much. Dr. S. B. St. John, under whose care she has been, reports that there is no lesion discoverable in the eye, and that the disorders of vision of which she complains are probably reflex, and due to irritation in the genital organs. She has also suffered greatly from intermittent fever.

An examination showed the cervix to be deeply lacerated bilaterally, the fundus bent back and very tender both to the sound and examining finger, the uterus slightly enlarged. The left ovary prolapsed into Douglas' cul-de-sac, and exquisitely tender to the touch.

Here then was a complication of maladies, some of which would certainly be very difficult to cure. Feeling that the severe lacerations of the cervix had a large share in the original production of the trouble, I determined to sew it up. After the usual preparatory treatment of hot water, iodine, etc., I performed the operation on April 1st. 1880. Six sutures were introduced. These were removed on the eighth day, when perfect union was found. As soon as the patient was strong enough to visit my office I attempted to retain the retroverted uterus in position and to hold up the ovary with a pessary. After a number of trials, extending over a long time, and after using a variety of different instruments I found it impossible to do so. This was due partly to the inherent difficulties of the case and partly to the exceedingly irregular attendance of the patient and to her very irregular course of life. She was full of malaria, having regular chills at times, and hysteria, and was in every respect a difficult case to manage.

Result. She was somewhat benefited by the operation. The eye symptoms were better, the leucorrhœa was cured, and the menstruation rendered more regular. For a time the back-ache was less and locomotion much easier. I have not seen her for a long time.

CASE V. The history of this case is from notes kindly furnished by her physician, Dr. C. A. Lindsley of New Haven.

Mrs. M. aet. 25. The mother of two children the youngest 3 years of age. At her confinement Dr. L. did not attend her, but she reported

that her labor was tedious and painful, owing to the large head of the child and her own diminutive size. She was delivered with forceps and there was a laceration of the perineum and os tinæ. Her convalescence was very slow and never complete. She had a displacement with various uterine symptoms, cervical inflammation, pain in the back, leucorrhœa, and general ill-health. Her second child was born in the spring of 1877. The labor was tedious and painful from the causes, but less so, she said than before. Although the local lesions were not aggravated perceptibly by the labor, her general health remained very poor, and the uterine troubles required constant treatment to keep her in a comfortable condition. In the winter and spring of 1880 her health was more decidedly impaired, her nervous system seemed to be gradually yielding to the strain upon it, by reason of her sufferings. She was evidently losing ground and getting into a state of health which occasioned much anxiety to her friends, a cough, no appetite, loss of strength and emaciation.

At this time I saw her and confirmed all of Dr. Lindsley's diagnosis. She was at once put upon the use of hot water, etc., under which she slowly improved, and on May 22d, 1880, I closed first the cervical laceration and then the perineum. The perineal stitches were removed in about a week, but owing to the danger of tearing out the freshly united wound, no attempt was made to use these in the womb until a month after. The attempt was then only partially successful, and three stitches were left *in situ*, and were afterwards removed by Dr. Lindsley. She made a slow recovery, partially owing to the irritation of the sutures. Dr. Lindsley says now that "her health is very much improved. She has become an expert at roller skating, which exercise she has indulged in very freely throughout the past winter."

I have no doubt but that this patient was saved, by these operations, from becoming a chronic and probably bed-ridden invalid; perhaps even her life was saved as well. Certainly every other expedient faithfully and skillfully tried had failed to give her anything more than slight relief.

Result. Cure.

CASE VI. Mrs. S. 42 years of age, married 17 years, 3 children and no abortions, was referred to me by Dr. Bloomfield, of Westbrook, Ct. She gave the following history: Her last child was born 14 years ago, was very large, weighing over 11 lbs, and although the labor and confinement were natural, she has never been well since. She has been weak and "poorly," at times better and again worse. Back-ache and pain in the side nearly constant, and in the hips very frequent, has bearing down pains when she stands and tries to work. For nearly six months she had hardly left the bed. The menstrual periods have come every three weeks, very profuse and lasting five days or more. Besides this there was a constant yellowish thick discharge, profuse in the

extreme. The digestion was poor, appetite fitful, defecation difficult and painful. An examination showed the perineum to be ruptured down to the sphincter ani; also the cervix lacerated bilaterally and the two lips so swollen and hypertrophied as to almost resemble two fibroid tumors. The surface around the os was raw and bled at the slightest touch. The fundus was heavy and the uterus prolapsed and retroverted. I advised the hot water and weekly application to the cervix. This treatment was faithfully carried out by Dr. Bloomfield and on the 1st of Oct., 1880, I went to Westbrook and operated. The parts were much improved by the treatment, and the operation promised every chance of success. Nine sutures were introduced. The tissues were so hard that the needles were bent and broken in the efforts to introduce them. She bore the operation well, and on the 11th day I went to remove the stitches. I found that they had all cut out, and that there was no union at all. The whole wound gapped as before the stitches were introduced. I performed the operation again on the spot and on removing the stitches on the 14th day found union perfect. I then restored the perineum, which operation was also perfectly successful.

The patient soon began to improve, and recently visited me at my office in Hartford, walking that day nearly two miles, besides taking a long railroad journey. I found the cervix in good condition, the uterus still retroverted, but much smaller than before. She still has some back-ache and pain in the left side, and a rather free discharge. Menstruation is much less profuse. Her general health is greatly improved. I introduced a pessary, which I have no doubt will complete the cure.

Result: The change in the patient's condition, from that of a helpless, bedridden invalid to a comparatively healthy woman, was very marked indeed. Although I cannot perhaps claim this as a complete cure, still time enough has not yet elapsed for her to get the full benefit of the treatment. She is at any rate very greatly benefited.

CASE VII. Mrs. M. Aged 34. Married 16 years. Four children. Was also referred to me by Dr. Bloomfield. I saw her first in June, 1880, when she gave me the history of uterine disease ever since her marriage, worse since her last child was born three years ago. At times she was obliged to keep her bed for weeks together, notwithstanding a most indomitable will and desire to help out her husband's scanty earnings. I found the cervix lacerated bi-laterally and the anterior lip greatly hypertrophied and hard. The uterus was anteverted, heavy, and enlarged, the sound going in $3\frac{1}{4}$ inches. I operated the same day with the previous case. The stitches were removed on the 11th day and perfect union was found. Dr. Bloomfield reports that she improved rapidly and steadily, and now considers herself as perfectly well. She is able to do her household work and perform the duties of a wife and a mother. The perineum was torn, but not so as to require an operation.

Result: Perfect cure.

CASE VIII. I saw Mrs. S. in June, 1880. She was then 23 years of age, had been married three years, and had one child two years old. Since the child was born she says she has had frequent desire to make water. Has felt very weak, with constant backache and inability to walk. No appetite. Menstruation rather scanty. Profuse, glairy discharge from the vagina. An examination showed the perineum torn to the sphincter. The cervix lacerated bi-laterally. Uterus anteverted, heavy, and congested. The sound passed in $3\frac{1}{2}$ inches. I operated Oct. 3d, after the usual preparatory treatment, not very faithfully carried out. The result was perfect union, and since then a gradual improvement in all her symptoms. She has also worn an anteversion pessary for some time. The uterus has diminished in size, and the leucorrhoea and backache nearly disappeared. There is still a progressive improvement.

Result: Greatly improved.

CASE IX. Mrs. G. Aged 26. Two children, youngest nine months old. This case greatly resembled case 8, except that the uterus was retroverted and the right ovary prolapsed. I operated Nov. 7, 1880, with the aid of Dr. Campbell, whose case it was, with the result of getting a cervix which looked like the cervix of a woman who had never borne children. The tissues were soft, as the youngest child was only nine months old. She wore a retroversion pessary for two months, and is now perfectly well. The uterus of natural size, and in its proper place. The ovary can no longer be touched.

Result: Cure.

CASE X. Mrs. H. Aged 26. Married ten years. One child, nine years old. Referred to me by Dr. Rockwell of East Windsor Hill. She stated at my first visit that she had been sick for a number of years, and notwithstanding more or less vigorous treatment by several physicians of various schools, she steadily grew worse. For a year she had hardly been able to walk across the room, from the pain in her side and back and a general sense of weakness. No appetite. Menstruation very scanty and irregular. Had lost flesh, and had about given herself up as incurable. I found the uterus anteverted, slightly enlarged, and the endometrium very tender to the sound. The cervix was the seat of a slight bi-lateral laceration, with a great degree of eversion and erosion. After trying various applications and the hot water douche, careful regulation of the diet, with tonics, and finding not the slightest improvement either in the general or local condition, I insisted on her coming to Hartford and having the cervix restored. This she consented to, and on Nov. 1, 1880, I proceeded to operate. I found it difficult to bring down the cervix sufficiently far to work easily. This I afterwards discovered was due to a large pledget of cotton which had been accidentally left in the vagina. Five stitches of silver wire were put into the cervix and the patient put to bed. She recovered nicely from the ether, and all went well until the fourth day, when, on attempting to

have a movement of the bowels, against my explicit directions, she strained very hard, and, as I afterwards found, and she suspected at the time, tore out one stitch at the left side. This left a slight gaping on that side, which has gradually closed by contraction of the tissues.

As I found the patient to be excessively nervous, and as she absolutely refused to eat and was much emaciated, I put her on Wier Mitchel's plan of rest, massage and forced feeding. She was rubbed twice a day and fed every three hours. At first she fought against this treatment, but in a day or two her appetite came, and when she got up at the end of three weeks she was a different woman. She returned home and continued to improve. Has gained 28 lbs., and is better in every respect. Lately she had a severe attack of menorrhagia, which pulled her down very much, but even then her condition is vastly better than it was. She lives in a malarial district, and has lately, since the flowing, enjoyed the luxury of a few chills. This complication is evidently keeping her back, as the causative relation existing between malaria and uterine disease is well understood. Were it not for that we might put her down as a cure, but owing to this can only give the

Result as, very greatly benefited.

I might add that I treated her with quinine and arsenic, but this had been done before without marked benefit. Since the operation I have made frequent applications to the endometrium, and for a short time tried an anteversion pessary, which did no good at all. An abdominal supporter has given more relief than did the pessary.

CASE XI. Mrs. H. Referred to me by Dr. Wainwright. Aged 24. Married four years. Two children, youngest eleven months of age. Ever since her last child was born she has suffered from backache and general weakness. Finds it very hard to do her work. Some pain in the womb. Menstruation profuse and slightly painful. An examination showed the womb slightly enlarged, and a bi-lateral laceration of the cervix, with considerable eversion, erosion, and hypertrophy of the anterior lip. Dr. W. stated that he had cured up the cervix several times by application, but that it would not stay cured, and he thought it a fair case for operation. I accordingly operated Dec. 6, 1880. Six sutures were used, and left in 13 days. The result was perfect union and an almost virginal cervical portion. A few weeks previous to the operation I thoroughly scraped out the uterus with the Thomas' curette, with the idea of stopping the excessive menstruation.

At a late visit I found the patient a good deal better. No backache and much less pain in the side. She still flows too much, and another scraping will doubtless be necessary in order to complete the cure.

Result : Greatly benefited.

CASE XII. Mrs. H. I saw her in consultation with Dr. Stevens of this city. She is 32 years old; has had three children and five miscarriages. The first abortion was 16 months after the last child, now six

years of age. At that time she was five months pregnant, and in endeavoring to deliver an after-coming head through an undilated cervix, the neck was broken and the head left in utero. In the endeavor to get out the head the cervix was very badly lacerated in several places way up to the internal os. A large piece between two tears on the left side apparently sloughed out, leaving a deep hole in the side of the cervix which reached up to the os internum. After this she had four other miscarriages, one each at the fifth and fourth months, and two at the third month. After the last one she had a severe attack of pelvic cellulitis.

When I first saw her last summer she was suffering greatly from the cellulitis. Under appropriate treatment she greatly improved, so that on Jan. 23, 1881, I closed the laceration. From experience in a similar case in New York, I did not try to bring the parts directly together, but freshened a space in the vaginal wall opposite the hole on the left side of the cervix, and used this to close it. Eleven sutures were used, and notwithstanding the violent agitation of the patient on coming out of the ether and a severe attack of diarrhoea on the fifth day, perfect union was secured. At a recent visit I found the patient suffering from a severe bronchitis which she had had for two months and which had kept her back very much. She was, however, beginning to pick up, and will doubtless in time be restored to a fair degree of health. The abortions were due to the loss of retentive power on the part of the uterus, from the deep lacerations of the neck.

I have seen this exemplified in several cases, and doubtless in many of the cases of frequent abortion which were formerly laid down to "habit" a previous laceration was the cause. The tendency to abortion induced by a laceration was well shown in the case of the wife of a physician in a neighboring town, where it was found necessary to keep the patient in bed for a number of months in order to prevent the ovum from slipping out of the torn and dilated canal.

Result: No benefit as yet.

CASE XIII. Mrs. J. Aged 23. Married two years. One child, nine months old. Referred to me by Dr. Irving Lyon. She was delivered by instruments and was very sick after it. The principal symptoms when I saw her were pain in the left ovarian region, dragging pains in the pelvis, and poor general health. An examination showed the uterus to be heavy, large, and the cervix lacerated deeply on the left side and slightly on the other. The left broad ligament showed the remains of an old cellulitis, which was still very tender. The cervix was widely abraded, and pressure on the torn part produced the pain in the left side of which she complained so much.

After six or seven months of treatment in the usual manner she had improved somewhat, but seemed to stay just about so; getting no better and no worse. I accordingly operated March 27, 1881, putting one stitch on the right and four on the left. The result was very good, and

a recent examination shows the uterus in place, reduced to its natural size, and not tender. The patient's general health is much better, and she has grown fat. The pain in the side is all gone.

Result: Cure.

CASE XIV. Mrs. S. Referred to me by Dr. Lyon. She was 43 years old, had been married 17 years, and had borne seven children, the youngest being five years old. She had likewise had three abortions. She was in good general health until five or six months after the birth of her last child, when she began to flood at her periods, and has been growing worse ever since. She has pain in her back and side, dragging pains in the pelvis; all worse during menstruation. Her general health very poor. Menstruation lasts seven to nine days, and the amount of blood lost is very great. An examination showed the uterus to be very large and heavy, the sound passing in $3\frac{1}{2}$ inches, and its position very low in the pelvis. The cervix was lacerated bilaterally, and the anterior lip greatly enlarged and hardened. The posterior lip was also enlarged. The endometrium had a few granulations sprinkled over its surface. After some slight preparatory treatment, I operated April 4, 1880. The stitches were removed on the 14th day. When I came to expose them I noticed that there was some hemorrhage. I got those on the left side out all right, but on the other side, on attempting to remove them, a portion of the wound tore open. I therefore left one stitch on that side in hopes that union might still take place. At a recent visit I removed the stitch and found union complete over one-half the length of the wound on each side. The long protruding anterior lip was much shortened and the whole cervix looked more natural. The surface was all healed over. She expressed herself as much better in every way but the flowing, this remaining about the same as before. I used the curette in my office and repeated it in a week, and now await the result at the next period.

Result: Still uncertain, but already considerable improvement.

Besides the cases thus far related, I have operated on three others,—one in Hartford, April 27th, with perfect union; one in Thompsonville, May 6th, same result; and one in Birmingham, May 13th, for Dr. G. E. Shelton.

This latter case was a unilateral laceration—five stitches being passed on the left side.

As these cases are of no especial interest, and are too recent to get a positive idea as to secondary results, I will not relate them in detail. Only remarking that the first and second, report decided improvement in the local and general symptoms already. (June 15.)

The cases in the second group were those where either the operation was recommended and refused, or where the patient

was not in a fit condition for operation, or—and the latter includes a considerable number of cases—where the laceration did not seem to be accountable either primarily or secondarily for the diseased condition. I find that so much time has been already taken up in the relation of the cases of the first group, that I must leave the consideration of the other cases to some other occasion. Some of them are of considerable interest, but as very few of them have been cured, a study of the results can give but negative facts. I might add that the conditions in which I have refrained from operating have been, bad cases of pelvic inflammation, old cases where the surfaces were all healed over without the formation of much new connective tissue on the substance of the neck, cases of slight laceration where there was no erosion, hypertrophy, or erosion of the flaps, or a high degree of subinvolution. For general contra-indications might be added phthisis, cancer, Bright's disease, and other cases of general diseases likely to prove more serious than the uterine disease, and which are not affected by it. A bad general condition has not hindered me, where the laceration seemed to be the cause.

As I have already mentioned, there are a good many points in connection with laceration of the cervix uteri which are still unsettled. One of them is the *frequency* of its occurrence. Without discussing the subject, I will merely give it as my experience that in about one-third of the women who apply to me to be treated for uterine diseases, I find this lesion to be present. That it is always the prime factor in causing the disease, I do not assert. In fact, I am sure that in some cases a very considerable laceration may exist without producing any bad effects. But such cases are the exception, and not the rule.

The *cause* of this accident is very difficult to determine. There must be a variety of causes, one or more of which acts in each case. I have taken particular care to enquire in every case, and in a few only have I been able to get a satisfactory answer. Great size of the child has been referred to more often than anything else. In one case (Dr. Shelton's), extreme rigidity of the cervix, a rigidity which resisted all efforts at dilatation, has been noticed. Instruments have been blamed in some cases. This I can readily imagine might be the result if the instruments were applied too early, before the full dilatation of the os, as is now so much the fashion. Precipitate labor has been noticed in two cases. These causes are all of such a nature, with the exception

of the too early application of the forceps, as to remove all responsibility in the matter from the medical attendant.

The *pathological complications* which I have found to exist in conjunction with laceration of the cervix, have been almost always subinvolution of the whole womb. This is perhaps the most important of the results, and if to this we add laceration of the perineum and subinvolution of the vagina, we have all the conditions for the production of displacements.

Displacements therefore have been almost universal. Retroversion first, prolapsus in some of its degrees all the way up to complete procidentia, second, and last but not least, as far as its curability goes, anteversion. In some cases the laceration, and in others the displacement seemed to be the exciting cause of the symptoms, the latter yielding to a great degree, as soon as the displacement was rectified, and in others, the symptoms yielding only after operation. Prolapse of the ovaries I have seen in this connection only three or four times. In one case they seemed to go back to their places after the operation.

Pelvic Inflammation has been a tolerably common complication, more so in the group which comprises those who have not been operated on, than among those which I have related. In one case which I saw with Dr. Campbell, in which both the perineum and cervix were torn, and in which there was extensive pelvic inflammation, cellulitis and peritonitis both, I advised against any operation. She afterwards went to the Womans' Hospital, N. Y., where the operation was successfully performed, but without any benefit, in fact, she has been, and is I believe, growing steadily worse. Operating in such cases can do no good, and will but tend to throw the operation into disrepute.

Symptoms. The study of the symptomatology of uterine disease is rather unsatisfactory. At times we meet with very extensive lesions with few or no symptoms, and again the most aggravated symptoms follow on scarcely discoverable lesions. This is true of distinct diseases by themselves, and of different diseases compared with each other. Menorrhagia has been present in eight out of the seventeen cases here presented, in two it has been extreme, and in one of them it still persists, while in the other it has been arrested by swabbing out the uterus, after previous dilatation, with fuming nitric acid, after a thorough application of the curette. Pain in various places about the pelvis has been a common symptom, but in this there is nothing

distinctive. At times it has seemed to be due to the lacerated and denuded surfaces, while again the accompanying cellulitis or displacement has been its manifest cause. Case three illustrates very forcibly the benefit to be derived from the operation in a case of hystero-neurosis of the stomach. The vomiting and pain in the stomach, which had been so severe as to lead several careful practitioners to the diagnosis of cancer of the stomach, have almost entirely disappeared.

Sterility has been an almost constant result, and we can readily understand how this is brought about. The congestion which is kept up results in a profuse cervical discharge, and this either prevents the ingress of, or washes away the spermatozoa as soon as they are emitted. Profuse leucorrhœa has been a constant symptom. This, although by no means pathognomic, still when found to exist in a woman who has borne children and to have followed the confinement, should always excite our suspicions, and lead to an examination.

The *condition of the cervix* itself in which a laceration exists, depends largely on the length of time since its occurrence, and on the degree of the tearing. In recent cases we generally find the surface denuded of its natural epithelium, the normal flat epithelium being replaced by a single layer of cylindrical cells, (so-called "ulceration"), the tissues swollen, and if very recent, and particularly if there be a retroversion, we may recognize the two distinct flaps which go to make up the cervix. Generally, to a superficial observer, a laceration is not so easy to recognize, as would at first be supposed. After a time the lips of the womb become spread apart and flattened out by the weight of the heavy organ pressing them against the posterior vaginal wall. In this condition, if an old-fashioned cylindrical speculum be introduced, nothing out of the way, except perhaps some "ulceration" will be noticed. But if a Sims' speculum be used, the uterus pulled down, and then the parts pulled together by two tenacula, the extent of the laceration will be at once apparent. It is with the finger, however, that the laceration can be most readily detected, and to one accustomed to search for it, it can be most readily and easily found in this way. Sometimes, and particularly in long-standing cases, the lips of the neck become so enormously enlarged by proliferation of connective tissue, as to greatly resemble fibroid tumors. In some of the text-books, particularly the English books, you will find them described as such, the true nature of the lesion not being at all recognized.

One condition which almost always exists where a laceration has lasted for a long time is a disease of the warbottrian follicles. These follicles are naturally found only within the canal and ease abruptly at the external os. With a laceration, however, the lining membrane of the canal becomes turned out and thus comes to cover the surface outside the apparent external os. By this unwonted exposure an inflammation of the follicles is started which ends in their closure. Gradually after this the contents accumulate and when we examine we find either small cysts filled with mucus covering the surface of the neck around the os, or else little depressions which are left by their rupture. From this it is evident that the finding of many of these little cysts or their remains on the surface or under the surface of the mucous membrane around the os is pathognomonic of laceration.

It has not been my custom to lay as much stress on the *preparatory treatment* as has been insisted on by Dr. Emmet. In case vi, where there was no union, preparatory treatment had been carried on in the most careful manner, and in some of the other cases where there had been actually no preparatory treatment at all, union took place perfectly. The deduction is obvious. I am always guided in this matter by two conditions: by the amount of congestion and denudation of the cervix and by the amount and activity of the cellulitis present. For both these conditions I am accustomed to advise long continued hot vaginal injections and applications of iodine, iron, etc. These should be kept up until all tenderness has gone and until the parts are pretty well healed over.

As to the operation itself there is little to be said. I have always followed Emmet's method, using Sims' speculum silver sutures and the curved scissors to denude with. Nor have I any desire to change except in the matter of sutures. I am intending to use the cat-gut sutures as used and recommended by Dr. Skene, especially in those cases where it is advisable to close both cervix and perineum at one sitting.

The choice of a speculum is largely a matter of habit, but I am convinced that Sims' instrument combines advantages which no other speculum possesses.

The *after-treatment* is very simple. Keep the patient in bed until the stitches are removed on the 12th or 14th day, and where they cannot use the bed-pan conveniently allow them to sit up to obey the calls of nature. I order a carbolized injection to be given

daily and the bowels to be moved by enema on the third day, and direct that there shall be no effort or straining at that time. The food may be anything not manifestly unhealthy or indigestible. Symptoms must be treated as they arise.

The *results* in the 19 operations here reported have been unknown, one complete failure and one partial failure. All the others may be classed as perfect successes. In two there was failure to get union right down close to the os, but this failure was only trifling and not enough to compromise the result of the operation in the least. In the other the os is like the os of a woman who had never borne children. In fact one was so narrow that I had thoughts of widening the opening a little in order to favor conception.

Now a few words as to *final results*. Does the operation do all that is claimed for it? Like all new therapeutic measures its true worth can only be discovered after a thorough and extensive trial. At first I was a little disappointed in not seeing benefit from it sooner than I did. But as I watched my cases, saw them steadily improve, grow fat, lose their aches and pains, and gradually assume their places in their families, I began to believe more and more in it. The improvement follows in some cases much more speedily than in others, while in some the immediate effect seems to be to slightly aggravate the symptoms. Six months at least should elapse before we begin to despair of benefit. As regards the curing of menorrhagia I have been disappointed, although in some cases it has been greatly lessened. It can, perhaps, hardly be expected that a disease which affects the lining membrane of the body can be removed by an operation on the cervix. The most that can be hoped for is that when the disease of the endometrium has been cured by appropriate treatment that by this operation the tendency to its return may be removed.

Taking the cases together which are here reported, 3 are too recent to get any decided results, although two of them already report decided improvement. One (case 12), a very severe one, after four months is no better and no worse. There is still, however, time for her to improve. Three are benefited, (cases 1, 4, 14.) Five are greatly benefited with every prospect of still further benefit and complete cure, (cases 3, 6, 8, 10, 11,) while 5, (cases 2, 5, 7, 9, 13,) can be set down as complete cures.

The two complications which seem to offer the greatest obstacle to complete cure are pelvic cellulitis and anterior displacements.

If either of these exist with a laceration and are evidently partially the cause of the symptoms, I always give a guarded prognosis as to complete cure.

The results here detailed in a class of cures which have hitherto been an opprobrium to gynecological practice clearly show not only that the operation of tradulonaphy, as it is now called, is warranted, but that its performance is rendered necessary in these cases which experience has shown are incurable by any other known therapeutic measure.

While I do not claim it for a cure-all, I still hold that in properly selected cases it promises results, the brilliancy of which must reflect a lustre on the originator, and through him on the operator, equal to that to be derived from any other operation in this branch of surgery.

In a recent number of the Boston Medical and Surgical Journal I find a paper by Dr. Clifton E. Wing of Boston, in which he takes the ground that this operation is done much more frequently than is necessary. He claims that it is a very dangerous operation, and that it should only be undertaken when imperatively necessary, with the implied assertion that it is not necessary nearly as often as is generally believed. As to the danger of the operation statistics show it to be one of the very least dangerous of all the operations on the uterus, and never dangerous when previous inflammation has not existed. In over thirty operations I have never but once seen any bad results and that was the patient's own fault, and she did not die, but ultimately recovered entirely. I do not know what may be the experience of others, but I do know that according to my experience, hereabouts at least, it is not done nearly as often as it should be. I should be very sorry to have the idea get abroad among the profession, who are just waking up to its importance, that this operation is but very seldom required ; for this certainly does not agree with my experience and belief.

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ESSAY.

MILK : ITS NATURE, ITS CONTAMINATION, AND AS A VEHICLE OF CONTAGION.

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Milk constitutes the sole nourishment of all mammalia during the tender period of the first few months of extrauterine existence, while with man it is used to a greater or less extent during the entire lifetime. The chemical properties of normal milk give it a preëminence over all other foods for the readiness with which it can be assimilated and form a constituent part of every tissue in the animal organism.

The secretion of milk in the mammary gland is accompanied by an absolute destruction of tissue in which the animal secreting this vitalized fluid yields up in a highly elaborated form part and parcel of its own bodily tissue: hence the purity of milk must depend on the healthiness or unhealthiness of the animal by which it is secreted.

When we consider the importance of milk as a factor in human existence—also that its nature is only partially known—its value as an article of food in health and disease is constantly increasing, while the numerous ways in which it is contaminated and made the vehicle for the transmission of disease are daily unfolding, it opens a new field for scientific study second to none in the realm of dietetics. We will first direct attention to some of the recent investigations as to the nature of milk. The gland destined for the secretion of milk stands alone among the secreting organs of the human system in presenting to the observer a series of variations which may be called natural or spontaneous, and are periodically called into play, and periodically rest.

It is a finely lobulated organ, consisting of a system of ducts terminating in the alveoli and lined with an endothelial membrane covered with a layer of columnar epithelium. Milk is secreted in the epithelial cells of the alveoli: several small milk globules can be seen, which finally merge into one large one, which is covered by a delicate albuminous membrane.

According to Langer & Stricker the epithelial cell ejects the milk globules produced in them without being themselves destroyed.

According to the more recent experiments of Schmidt & Schenk of Germany, and those made at the Connecticut experiment station by Mr. Armsby, the cells themselves undergo a degeneration in the formation of the milk globules, and are replaced by new cells produced by the division of other cells. These experiments have also established the fact that milk is not a simple secretion from the blood, like the urine in the kidney and the digestive fluids in the stomach and intestines, but is formed in the milk glands from the cells of the gland itself. This conclusion has been reached by a series of analyses, which shows that the composition of the ash of milk is like that of the tissue of the milk-secreting organs. Were the milk a simple transudation from the blood it would have a similar composition. It is from an examination of what is termed the liquid portion of milk, or skimmed milk, that we are led to the conclusion that it is not a simple filtrate, or secretion from the blood. Milk contains from 2 to 5 per cent of caseine, a substance not found elsewhere in the body. It also contains from 2 to 5 per cent. of milk sugar or lactene, and this substance has never been found in any other part of the general organism. Hence it may be claimed that these two substances in milk, together with the composition of the ash of milk is sufficient to show that milk is not a secretion from the blood entirely, but that it is built up of the cell formation of the gland itself.

II. THE CONTAMINATION OF MILK.

The avenues through which milk may be contaminated are very numerous. The mammary gland is subject to a greater activity, and is the seat of more pathological conditions than any other gland of the body. It readily sympathizes with the general system, and the milk secreted is chemically changed and deteriorated by both acute and chronic diseases.

The disease in Bovines by which milk becomes contaminated are according to Fleming, Foot and Mouth diseases, Anthrax and

Tuberculosis. In the two former diseases the danger is but slight, while in the latter it is believed to be very great, yet there are authenticated cases in which Foot and Mouth disease and Anthrax have been communicated by the milk. The recent experiments of Prof. Bollinger of Munich, Prof. Conheim of Leipzig, Kelbs and others, have thrown additional light on the transmission of Tuberculosis by milk. Rabbits, Guinea Pigs, and other animals, and even dogs fed with the milk of tuberculous animals, have contracted the disease, also boiling the milk does not destroy its infectious power. They also maintain that the great prevalence of tuberculosis among the herds of cattle is a source of great danger to the health of the community.

According to Fleming the exact cause of tuberculosis is very indefinite, owing to the insidious onset of the disease in the human species; but he believes that milk is one of the vehicles by which it is frequently transmitted. Also that tuberculosis is a common and distinctive disease among cattle, especially in towns; and the udder is one of the glands not infrequently involved. Therefore he concludes that milk from tuberculous cows should be prohibited as an article of food, and especially for infants who rely mainly on this fluid for their subsistence, and whose powers of absorption are very active. Gerlach and others have proved by numerous experiments that milk from tuberculous animals is positively infectious and can be transmitted from one animal to another and to man.

The specimen of tuberculous udder herewith exhibited has the following history. In Manchester, Conn., last year a nearly full-blooded Jersey cow, on account of a habit of kicking, was used to fatten calves. The first calf fattened very well, and was killed. About this time the cow began to grow poor and cough. A second calf was put with her, and instead of fattening, it gradually grew poor and died. A third calf was also put with her, but the cow died of tuberculosis a few weeks later. At last accounts the third calf was rapidly running down and had become feeble.

A post-mortem was made on the cow by Dr. Cressy, who found the *udder* entirely infiltrated with tuberculous deposit. The lungs, liver, and peritoneum were also infiltrated with the same deposit.

* According to the analysis of cow's milk in health and disease by Dr. Wynter Blyth, of Devon, (reported in the *Veterinary Journal* for August, 1880,) he points out the chemical change in tuberculous

milk. Albumen is very abundant while the alkaloids are entirely wanting. This condition is sometimes called *lacto-albuminuria*. This chemical test will probably yet be of great value in determining the quality of milk.

Tuberculosis has for some time been known to prevail in nearly all European countries. As to its prevalence in this country, Dr. Cressy says in his article on the transmission of the tuberculosis [in the report of the State Board of Health] that, "In the absence of statistics it will be impossible at the present time to estimate with any degree of accuracy the enormous extent to which this disease prevails among our dairy stock; but if calculations can be based upon the inspector's reports in Italy and in Bavaria and other German states, we must conclude that five per cent. at least of our bovine animals are now affected—and with every facility for its rapid increase." Prof. Law, from his extensive observations, claims that in certain districts thirty per cent. of the cattle suffer from tuberculosis, and in many high-priced herds this scourge yearly claims its victims.

There is another point to which more attention should be directed by the profession: the recommending of *one* cow's milk for infants and children, instead of the mixed milk from the dairy is objectionable. It is a well-known fact that cows not infrequently suffer from some local disturbance from eating food improper in quantity or quality, and may remain in a feverish condition for several days; during this time the milk may cause a serious illness or even death of the child. A proprietor of one of the milk depots of New York city, says that this frequently occurs. The milk is sent from his creamery in this state to New York in glass jars, air-tight, and so arranged that the same cow's milk goes to the same family each day. It was reported to him on one occasion last autumn, that children in certain families were suddenly seized with severe pain in the stomach, followed by a profuse diarrhœa. Investigation revealed that the milk came from his own creamery. He went at once to his farm and found that one of the cows had by accident broken into the orchard, and eaten a large amount of apples; was bloated and quite feverish, but her milk had been sent to market as usual. The milk was stopped and the children at once recovered. Had this cow's milk been mixed with that of the dairy, probably no bad effect would have followed.

III. MILK AS A VEHICLE OF CONTAGION.

Milk is very susceptible to atmospheric and other conditions to which it may be subjected. It readily absorbs morbid germs, and is a most convenient vehicle to convey them to the system of milk consumers. Criminal carelessness frequently occurs on the part of dairymen and milk-dealers. Many epidemics of contagious diseases, followed by a great mortality, are traced directly to the use of milk from a dairy where members of the family are suffering from the same disease. The quiet way in which communities submit to such abuses which often occasion the most calamitous results, is astonishing. The principal diseases transmitted by milk, are Typhoid Fever, Scarlatina, and Diphtheria.

TYPHOID FEVER.

April 24, 1880, Dr. Russell, health officer, was informed of an outbreak of typhoid fever in a district in Glasgow. The cause was at once investigated. All the cases at first reported to him, obtained their milk from the same dairy, which we may call No. 1. Presiding over this dairy was a family in which the fever existed, and they were supplied with milk from another dairy which we will call No. 2. It was found that No. 1 obtained milk from No. 2, when on further investigation the dairy maid and the farmer's daughter were found sick with typhoid fever. The supply of milk from that farm was at once stopped, and the epidemic was checked. In March and April there were 508 cases of fever, and seventy-three per cent. were customers of the suspected dairies. Fifty-eight per cent. of all the deaths from enteric fever were customers of dairy No. 2. The height of the fever was coincident with the milk supply from the farm where typhoid fever existed, and it subsided as soon as the milk supply was stopped. Dr. Russell thinks that dairies should be inspected, and sickness in the dairymen's families at once reported to headquarters, and the milk temporarily stopped.*

An outbreak of Typhoid Fever occurred in Paddington, a sea-side resort in Yorkshire, England, which seems to have been due to neglect of sanitary precautions in a private dairy. In October eight deaths occurred from this disease. Suspicion rested on a certain milk supply, where the water used in the dairy was drawn from a well 18 feet deep, sunk through a gravelly soil on a low

* *Brit. Med. Jour.*, June 26, 1880.

field, where a downward percolation would readily take place. In the lane where the dairy is situated, the sewerage of several houses flows into a deep ditch, at the bottom of the adjacent garden, filled with stagnant water. At one of these houses was a case of typhoid fever: an occurrence which, taken in connection with the recent outbreak, raised the suspicion that the typhoid fever from the patient, in some way got into the water used in the dairy. The eighty-three households supplied by the dairy were visited, with the result of finding forty-seven persons suffering from typhoid fever.

It was the opinion of the health officer, that the infected milk was the cause of the fever.*

An epidemic of typhoid fever of considerable interest occurred at Penzance, January, 1880. The facts briefly stated are as follows: During January an unusual amount of typhoid fever appeared in town, and on inquiry it was found that every case was supplied with milk from one particular source. This milk came from a farm about four miles distant, where two or three members of the family were suffering from typhoid fever, one having died from the disease. It was subsequently discovered that the same woman who milked the cows, washed the buckets and pans and looked after the milk generally, nursed the typhoid patients and washed their clothes.

The milk required for the family was admitted to be taken occasionally in the milk pail into the infected house. It is therefore easy to see the possibilities of infection reaching the milk. Altogether, twenty-six cases were reported to the sanitary authorities; four of these proved fatal. On the connection of the milk with the outbreak being discovered, the supply from the farm was at once stopped, and the disease soon died out.†

A somewhat serious epidemic of typhoid fever, due to infected milk, occurred at Worthing. The facts stated by Dr. Kelly are these: The son of the occupant of one of two adjoining houses returned from London Sept. 16, apparently in good health. On Sept. 24 he fell sick of typhoid fever. The excreta of the patient were thrown down the drains, which were very defective. The two families had in common a well which had been in use for forty years or more. The previous April it was cleaned out, and the walls whitewashed. An examination of its interior after the

* *Brit. Med. Jour.*, Nov. 15, 1880, p. 786.

† *Brit. Med. Jour.*, July 3, 1880, p. 37.

epidemic occurred showed a palpable soakage into it a little above the water line on the same side and just beneath the drain of the house where the patient was sick of typhoid fever.

The infected discharge from the enteric fever patient undoubtedly found their way into the well. The dairyman used this water for washing his milk-cans. In October cases of typhoid fever occurred in all the houses supplied with milk from this dairy. In November suspicion of the milk supply as the cause of the epidemic was so far aroused that the handle was taken from the pump and the next day the well was filled up. The last case of fever in which infected milk could be accepted as a cause occurred five days after the filling up of the well. Persons who obtained their milk from the same farm from cows of their own escaped the disease. Thus it appears that the milk as supplied at the farm was not at fault, but that it must have become polluted after it entered the dairyman's cans. There were forty-four cases in all, eight of which proved fatal. Those who drank large quantities of milk were the chief sufferers; those who boiled the milk escaped the fever.*

SCARLET FEVER.

A most interesting case is reported by Dr. Hubert Airy to the local government board of a sudden outbreak of scarlet fever at Fallowfield. "There were in all 35 persons in 18 families attacked within a period of one month, and of these 35 no fewer than 24 were attacked within a space of 36 hours, between Sunday morning, August 3d and Monday evening, August 4th. Vomiting and diarrhea was so characteristic a symptom that medical men concluded that it must be taken by injection and that all the cases had a common origin. Suspicion at once fell on the milk supply, and on inquiry it was found that every family that had been attacked received their supply of milk from one and the same dairy; while neighboring families receiving their milk from other dairies had entirely escaped.

It was further found that one of the milkers employed at this dairy lodged at a house where a boy lay in the desquamating stage of scarlet fever. The conclusion was that he had conveyed the contagium of the disease to the milk: a conclusion only reached after carefully excluding all other possible sources." †

* *Brit. Med. Jour.*, Dec. 11, 1880, p. 933.

† *Brit. Med. Jour.*, Jan. 17, 1880, p. 107.

The careful manner in which Dr. Airy investigated every other possible source of transmission of scarlet fever in this epidemic renders his conclusions of great value and establishes the fact that it was actually conveyed by the milk. There are some most interesting facts as to the symptoms produced. As stated, vomiting and diarrhea being a constant and marked symptom. In some it was almost the only symptom. In one of the earliest cases occurring in an adult it did not show full febrile development. It was remarked that the symptoms were more those of an irritant poison than scarlet fever. There was no doubt as to the identity of the disease, as nearly all had in addition to the irritation of the alimentary canal all the characteristics of the disease.

Another equally interesting fact is *the short period of incubation*. A child went to the farm where the infected milk was obtained and drank of the milk August 2d; on the evening of August 3d premonitory symptoms appeared; on the morning of August 4th the eruption appeared. the period of incubation being about 36 hours. Several other similar cases were carefully noted. In the report of Mr. E. L. Jacob, medical officer of health of East Surry, Eng., is contained additional evidence that scarlet fever is conveyed by milk.

June, 1878, there was a small but alarming outbreak of scarlatina—a total of twenty cases in seven hours—with two deaths reported. The first appeared in the family of the cowman. Some of his children had recently had it in another part of the country and had returned home. An infant took it from contact with the sick child of the cowman. Between June 1st and 7th fifteen cases appeared in distant families which had had no communication with the infected person, but all were supplied with milk from the dairy where the “cowman” worked; but several families who scalded the milk escaped the scarlet fever.

About this time there was another outbreak of thirteen cases in Headly. There was good grounds for supposing that the outbreak was due to specific infection of milk from a private *dairy*. Unknown to his employers the cowman at the dairy had recently had scarlatina in his family and he continued to milk the cows during the illness of his children.

These examples are sufficient to show the readiness with which disease may be transmitted by milk.

DIPHThERIA.

The evidence that *Diphtheria* is conveyed by milk is not as conclusive as it is in regard to *Typhoid Fever* and *Scarlatina*. The investigation of the cause of an outbreak of diphtheria in the north of London by a government commission in 1879 gave negative results *as far as milk was concerned*. An outbreak of diphtheria in Bradford was investigated by Mr. Butterfield, and he attributes the outbreak to the milk supply with some show of probability.

The child of a milk dealer was taken ill with sore throat. Later four cases in three separate houses occurred. The houses were in a good sanitary condition and there was no connection between the families. The only point in common was that the families all received milk from the dealer whose children were sick with the disease. On the occasion of the inspector's visit the milk cans were not washed at 11 o'clock, A.M. The cans were kept in a dirty kitchen and under the sink was a chamber containing the excreta. Resting on the milk cans was a bundle of linen from the bed of the child ill with unmistakable diphtheria.

From the foregoing facts we conclude that as the ash of milk and the ash of the gland producing it are chemically the same, therefore it is not a simple filtrate from the blood, but that its production is accompanied by the absolute destruction of the gland tissue in which it is produced. Also that milk may contain the germs of a disease with which the animal producing it is suffering, and may communicate this disease to persons consuming the milk. Also that one cow's milk is more dangerous for the feeding of infants than the mixed milk of the dairy. Furthermore that contagious diseases are frequently transmitted to families by milk.

When a contagious disease is taken into the system by injestion it causes an irritation of the alimentary canal, resulting in vomiting and diarrhea, and the period of incubation is greatly shortened.

ESSAY.

LACERATION OF THE FEMALE PERINEUM.

W. C. BURKE, JR., M.D, SO. NORWALK, CT.

There is scarcely an accident befalling the parturient woman, not necessarily involving danger to her life, that deserves more attention, either for its prevention or repair, than rupture of the perineum; and yet there is no point in the care of these patients, that for some unaccountable reason is more uniformly neglected and slighted. Physicians habitually do not examine it after labor to see if its integrity has been impaired. This has been largely due to a want of knowledge as to its anatomy and function, and consequent under-valuation of its importance, as well as to a mysteriously false notion prevalent in the profession that laceration of the female perineum in labor should be placed in the list of disgraceful occurrences not to be investigated nor acknowledged as existing.

"I have of course seen it ruptured but never heard from it afterwards," is the almost universal testimony of the general practitioner, unless it happen to have torn into the rectum. True the obstetrician may not hear of it but the gynecologist's work increases by reason of this very neglect.

The study of the female perineum involves necessarily its anatomy, its functions in the puerperal, and nonpuerperal woman, the causes of rupture or loss of function, means, if any, for prevention and treatment. The anatomy of the female perineum, astounding as it may seem, has received but little study except from one or two men. Among anatomists, Gray, Holden and Ellis, Wilson, Quain, and others, pass over it without special mention, or at most speak of it as the floor of the pelvis, the space from the junction

of the labia majora to the anus, made up of skin, mucus membrane, cellular tissue and the aponuretic union of muscles, or refer you to the dissection of the male perineum.

From obstetricians, at least, we might with reason expect better things, but not one devotes more than six or eight lines at the most to its anatomy, or content themselves with the assertion, "that the anatomy of the perineum is of great interest to obstetricians," then drop the subject as though their entire duty in this direction had been performed.

To Dr. Savage of London is due the credit of being the first to give a clear and detailed description of its anatomy, describing it as a wedge-shaped *body* located "midway between the posterior vulval commissure and the anus. Those perineal structures which meet there (i. e., the superficial sphincter ani, the superficial transversus perinei, the bulbo-cavernosus or sphincter vaginæ muscles, and some fibres of the ischio-cocygeus, and of the levator ani muscles with their enclosing fascia) become, as it were, fused together by a great accession of elastic tissue, without altogether losing their identity. The result is a body or structure at once highly elastic or resistant. The integrity of the female perineum depends entirely on this perineal body."

While Dr. Thomas has still further developed its anatomy, physiology, and, as he most happily terms it, philosophy, in an article before the New York Academy of Medicine last year and now incorporated in the fifth edition of his work upon Diseases of Women, as chapter ix.

In the normal condition for a short distance below Douglas's cul-de-sac the rectum and vagina lie almost in contact, then the rectum curves backward and downward to the anus, and the vagina downwards and forward to the introitus vaginae, leaving a space somewhat irregularly triangular, sharply concave behind, convex in front, with its apex just below the bottom of Douglas's cul-de-sac, and its base resting upon and becoming superficial by the plane ordinarily described as the female perineum. The upper part of this triangle is made up of strong cellular and elastic connective tissue resting upon and blending below with the muscles and fascia. Upon its anterior or convex surface rests the posterior wall of the vagina which in turn supports the anterior, this the bladder, and on the bladder rests the uterus, and on the contraction of the muscles entering into its formation the whole perineal body may

be elevated, giving greater support to the pelvic contents during violent exercise, as lifting, etc.

In the posterior or concave face rests the rectum, while above the vagina by its superior or backward curve forms a concavity which contains the cervix uteri impinging upon the rectum, and thus by what Prof. Thomas calls its shelf-like action contributes to the retaining of the uterus in its normal position.

The functions of the perineal body in the nonpuerperal woman are thus summarized by Prof. Thomas (op. cit.) "1st.—It sustains the anterior wall of the rectum and prevents a prolapse of this, which would inevitably drag downward the upper vaginal concavity and with it the cervix uteri, and destroy the equilibrium of the uterus. 2d.—It sustains the posterior vaginal wall and prevents a prolapse of this, which would allow of rectocele. 3d.—Upon the posterior vaginal wall rests the anterior, upon this the bladder, and against the bladder the uterus, all of which depend in great degree for support upon the perineal body. 4th.—It preserves a proper line of projection of the contents of bladder and rectum and thus prevents the occurrence of tenesmus, a frequent cause of pelvic displacement."

Thus we see, that the importance of this structure in keeping up the normal relation of the pelvic contents, can hardly be over-estimated. Yet it is almost entirely disregarded by those who practice, as well as those who teach obstetrics.

We have thus outlined the function of the female perineum in the nonpuerperal woman. In the parturiant, it has another and no less important office to fulfil in the mechanism of labor. Dr. Savage (Female pelvic organs, Am. Ed., p. 11) thus speaks of its condition during the final stage of labor. "*The completion of the last stage of parturition is possible only through the adequate dilatation or rupture of the perineal body.* The perineal septum is elastic, like the remainder of the vagina, but the resistance of the bilateral ligamentous structure, resulting from the union of the perineal aponeuroses along the lower edge of the septum, throws the strain almost entirely *on the perineal body.* The foetal head passes through a longitudinal rima bounded by two lines of parallel muscular fibres, extending from the pubis to the coccyx. The length of these fibres, and their arrangement into bundles separable laterally, allows of a preliminary globular expansion over the presentation, but its final covering is *solely the perineal body enormously distended and attenuated in proportion.*"

But further, the perineum has a distinct office to perform in the mechanism of parturition, due to its elastic properties, by which the presenting part is driven down by the uterine forces, out from the pelvis, towards the coccyx, and posterior segment of the perineum, this elasticity causing the head to hug the pubis, and that being a fixed point it there pivots and the face, in occiput anterior cases, sweeps over the perineum.

It is important that we should distinguish between the dilatability and elasticity of the perineum.

Thus it may happen and in fact frequently does happen, that the perineum will dilate sufficiently for the passage of a large foetal head, still has so slight a power of elastic resistance it does not resist the simple expulsive force of the uterus, and consequently does not produce the normal extension of the head. But the perineum stretches, and stretches only, and as a consequence does not keep the head close to the pubis, around which this extension can alone take place. For the uterus cannot act as it were around a corner, but drives the head against the perineum, bulging it out, stretching it up to that point that it can no longer dilate, when rupture will take place. What in such a case is needed, is not distensibility, but elasticity, which shall cause the head to sweep over, not through, the perineum; a proper appreciation of this fact will to my mind furnish the key to a large proportion of the cases of rupture, and furnish a hint for a rational mode of so-called support.

The causes of rupture are varied, quite formidable lists are given by systematic writers upon this subject, so that we might almost wonder how any perineae escape scathless. Among them I think the one just mentioned is very prominent.

A faulty construction of the pelvic outlet, *i. e.*, where the ischia are abnormally approximated, narrowing the pubic arch and so crowding the head too far posteriorly,—a roomy shallow pelvis with too straight a sacrum,—predisposes to rupture rather than the converse. Rupture will occur when there is undue rigidity of the vaginal orifice, which may be due either to its own natural rigidity, nondevelopment, or cicatricial contraction.

An excessively precipitate delivery may cause rupture, when by more delay the parts would sufficiently dilate, but this is too often assigned as a factor, for the perineum in common with the rest of the parturient canal has been undergoing development all through pregnancy for this very act. But on the other hand prolongation of the perineal stage has a tendency to weaken this tis-

sue by impediment to the circulation and thus impairing its vitality. Improper support is a fruitful cause to which I will refer when speaking of support of the perineum.

The use of forceps is perhaps more frequently charged with causing rupture than anything else, but I think very unjustly. There is no question but the improper use of them will tear the perineum as well as cause a vesico-vaginal fistula, or any other grave lesion, but properly and skillfully used, I think they are one of the most effective means in our hands to prevent this very accident. You can if you choose remove them when the head is brought fully down upon the perineum, *i. e.*, after the head has escaped from the bony pelvis, and extension has at least partially taken place, completing the delivery by enucleation with two fingers in the rectum, or by pressure upon the fundus uteri. But at this time, as has been shown by Tyler Smith, the pains owing to reflex action are markedly increased, and by the removal of the forceps you lose the best means of retarding the too rapid advance of the head at a dangerous time; as well as the most efficient means of guiding the head in the proper direction. These thin blades when correctly applied and are carried so that the curve of the forceps corresponds to the axis of the outlet, do not increase the stretching of the perineum or vaginal orifice. I have several times seen the perineum torn after the removal of the forceps by the uterine pains alone. But I do not now recall a case in which rupture has taken place, where skillfully handled with them still on, in which the perineum would not have been torn without them. On the other hand I know that I have many times prevented rupture by their use, that would inevitably have taken place without them.

Rupture of the perineum may be defined as a splitting of the perineal body to a greater or less extent. Usually this involves both the mucous and cutaneous surfaces, but in occasional cases you may have the mucous membrane and skin both torn with the perineal body left entire. Dr. Alexander J. C. Skene was the first, I think, to call especial attention to a rare form of rupture in which the coverings of the perineal body are left entire, but the body itself is destroyed by the separation of the aponeurotic union in the mesial line. This form of the accident is most pernicious in its results, because of the entire loss of function of the perineum and its liability to be overlooked unless especial pains are taken for its discovery. A few rare instances are given in

which central perforation of the perineum has taken place, its anterior and posterior portions still remaining uninjured.*

The results of rupture of the perineum are much more grave than is generally supposed, if we are to judge by the practice of the majority of physicians. These may be immediate or remote, local or constitutional. Patients' lives have been jeopardized by hemorrhage from torn vessels of the perineum; ergot and other remedies used under the belief that they were dealing with a case of post partum flooding. If the rent has extended through the anal sphincter we of course have involuntary escape of the rectal contents. In cases where the sphincter has not been divided, we, after time more or less remote, have prolapse of the posterior, or anterior vaginal wall, one or both, and with them the anterior rectal and posterior wall of the bladder respectively, and with this prolapse there is loss of power in the bladder and rectum to project their contents in the proper direction; which will not only increase the existing deformity but produce tenesmus which still further tends to displace the pelvic viscera. As the perineum indirectly supports the uterus, its loss by division *favors*, though it does not cause prolapse of this organ. Subinvolution of the uterus and vagina is by no means an uncommon sequence from laceration. Besides these results, Prof. Thomas (op. cit., p. 167,) gives ten others which more or less remotely arise from this accident. He says: "This array may appear unnecessarily formidable, but there is not one pathological condition mentioned which practical men will feel inclined to question the occurrence of, as a consequence of puerperal laceration of the perineal body."

The results of the slighter degrees of this accident in their effect upon the nervous system are thus emphasized by Dr. T. A. Emmett in the introduction to his chapter upon perineal laceration: "A laceration of the perineum is sometimes accompanied by a general irritability which cannot be traced to any other cause, and is only relieved when it is restored. I have known of several instances in which the existence of scars on the perineum had so much effect upon the nervous system as to entirely change the disposition of the woman; and yet they were not conscious of any local difficulty." The local consequences are due to loss of substance and perverted muscular action. The general and consti-

* For further particulars of this branch of the subject I would refer you to a little book by Dr. Mathews Duncan, entitled "Papers upon the female perineum," which contains the fullest resumé I am acquainted with.

tutional disturbances may not be so readily accounted for but are no less tangible.

In a paper by Dr. T. A. Reamy of Cincinnati, published in vol. ii. of the transactions of the American Gyn. Society, he makes the following pertinent remark: "I think that we may safely affirm that too much has been expected from the let alone treatment, and that the consequences of nature's failure, here more fully to effect restoration, have been too little appreciated by the profession." He arrives at the following conclusions based upon the examination of 600 cases of rupture not involving the sphincter ani; they appear of so much importance that I will give them entire: "1st.—Slight perineal lacerations play a more important role in the induction of bodily and mental disease than is generally recognized. 2d.—Since a perfect cure in any case can only be effected by surgical closure of the torn edges, immediate or remote, the same rules should apply to the management of simple cases as to the severe ones. 3d.—It would follow that simple cases ought generally to be operated upon at the time of the accident, since this is accepted as proper for severe cases. 4th.—Cases of perineal laceration in the first and second degree which are not closed by suture primarily, should be operated upon as soon as any of the symptoms, physical or mental, traceable to the deformity, arise."

Having thus clearly, I think, proven the importance of this lesion, it behooves us to consider for a few moments the methods proposed for its prevention. The most exhaustive article upon this branch of our topic that I am acquainted with, is one by Prof. Goodell of Philadelphia, (in the American Journal of Medical Sciences, 1871,) from which I take the following historical references: The occurrence of this injury was clearly recognized by the ancients, although the idea of support as a prevention was not introduced until about a century ago. To Puzos, who wrote about 1750, is usually accredited the honor of first advocating this procedure. Hamilton, Foster, and Dease about the same period also proposed it, though the former in a later edition of his work speaks of it as a "doubtful and hazardous expedient."

Dr. F. H. Stewart of Brooklyn, in a paper before the King's Co. Med. Society, thus summarized the various methods that have been suggested for preventing laceration: "The perineum is pressed back toward the coccyx in the intervals of pain. The perineum is dilated circularly, the fingers are introduced into the

rectum to push the head forward toward the pubis. The fingers are introduced into the rectum to push back the tip of the coccyx. Or the hand was carried in to the vagina and "pressed firmly with the palm upon all the bones of the coccyx." The perineum was pressed back over the presenting part. The labia was separated and pushed backward. The perineum was drawn forward and extended. The vulvar orifice was surrounded by the thumbs and forefingers and so its circumference stretched. The head was pressed upon to prevent the too rapid progress of labor. The perineum itself was pressed upon firmly with the hand, with a like object, and we may add the head was pressed upon to prevent extension. The fingers were carried into the rectum to aid extension. In support proper so called, various methods have been suggested, all having strenuous advocates. The hand is applied to the edge to form as it were an artificial perineum. The naked hand is applied longitudinally, transversely, the fingers pointing upward, the fingers pointing downward. Some prefer a folded napkin, some an unfolded one. These last two are very common and favorite methods now in use, *and are most pernicious.*"

Dr. Goodell in his "Lessons on Gynaecology," thus sarcastically characterizes them: "As runs our nursery rhyme, Simon says thumbs up, Simon says thumbs down, and yet the perineum tears, and tear it will until woman becomes like the cherubs of the old masters, all wings and no body."

Tyler Smith first clearly brought out a most important observation that pressure upon the perineum either by the advancing presentation, or the hand of the obstetrician through reflex action, strongly increases the pains, and so precipitates labor. This is a fact of common observation and is frequently utilized in lingering labors even early in the second stage. From the publication of this observation dates the modern practice in regard to supporting the perineum. This practice is *not to touch* the perineum *at all during labor*. While this mode has many and a growing number of adherents, still the practice of support has many prominent advocates, chief among whom may be mentioned Mathews Duncan. If the word support were changed for that of relaxation I think there would be less dissension in the profession as to this point, and better practice would follow. The obstetrician who closely watches the advancing head, rendering such aid as may be in his power, to secure the relaxation of the perineum, and that passage of the coming presentation be in the proper axis, seeing to it that

the head shall hug closely the pubic arch, and that extension shall occur slowly, and regularly, and not too early, *keeping his fingers off the perineum during a pain*, endeavoring, if you choose, to enucleate the head in the interval of uterine contraction, will have far fewer ruptures of the perineum in his practice than the man who by any stereotyped process makes pressure directly upon the perineum. Leishman in his system of midwifery, says: "The practitioner who never puts his hand to the perineum will, we firmly believe, have fewer cases of ruptured perineum in his practice than he who admits support in *any form* as applicable to every case of labor."

Dr. Goodell's mode for securing relaxation of rigid perineæ, which is frequently mistaken to mean support, is a good one, and I give it in his own words: "When the perineum is very rigid I relax it by hooking up and pulling forward the sphincter ani with two fingers passed into the rectum while with the thumb of the same hand I make the needful restraining pressure upon the head." Anaesthetics are a most useful auxiliary in cases where there is danger of rupture from rigidity, but needs to be pushed nearly or entirely to the surgical degree.

The slight operation of Episiotomy, which consists in making a slight incision involving the integument upon either side of the fourchette from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch long, directed obliquely outward and downward, is very strongly urged by many excellent obstetricians in cases where there is threatened rupture. Some recommend it in all cases of rigidity, but the most conservative reserve it for cases of rigidity from cicatricial contracture only.*

The frequency of this accident of course will vary in the practice of different men. Snow Beck, a prominent English obstetrician, found it 75 times in 112 cases of primipara. If we were to interrogate practitioners upon this point their replies would be most contradictory, and why? Partly because of different methods of managing the perineum, but chiefly because of the modes of examination. A large number of physicians never examine their patients at all to see if they have received any injury. A small number examine by touch only, others examine after the head is born, before birth of the shoulders; when the shoulders coming along precipitately, or being delayed, are hooked down by a finger in the axilla, the benumbed perineum is again suddenly

* Dr. Anna E. Broomall, of Philadelphia, has written an excellent article upon this operation to be found in the July number, 1878, of the *Journal of Obstetrics*.

stretched by the unsymmetrical shoulder and laceration is produced. Dr. Stewart asks the following pertinent questions in the paper above referred to: "Now in the light of the importance of this subject, which is made manifest by the practice of gynaecology, and its showing of the evil consequences, as well as the frequency of such lacerations, is it not time that a uniformity of practice should obtain? Should there not be this definite rule observed in every case? *Examine the patient by sight as well as touch, to see whether there is, or is not, laceration of any portion of the vulva or perineum.*

There is but little pain experienced by these patients, certainly it will be entirely out of all proportion to the extent of injury, even when a rent has extended into the rectum, they are not made conscious of anything being wrong, until they find themselves unable to retain the contents of the rectum. On this subject of examination of patients, Dr. Goodell (op. cit.) says: "The prudery of obstetrical teachers has, I am sure, been the cause of many undiscovered, and consequently uncured lacerations. But why should a false delicacy interfere with the freedom of manipulation at a time when a woman's health and happiness lie at stake, especially since her organs are then no longer *sexual*, in the common acceptance of the term, but *parturient*."

The almost universal practice has been, even where this accident has been recognized, to say little or nothing to the patient and direct the nurse to place a binder upon the knees and turn the patient upon the side, in the expectation, or rather hope, that it will "heal," "unite," that there will be "union by first intention." With regard to this expective or let alone form of treatment, the testimony of those who practice gynaecology and see the results of these "cures," are very emphatic against such being the result. A rent seen at the time of its occurrence or immediately after may appear formidable, but after a few days when the swelling of the parts has subsided may appear but the fraction of an inch in extent, *ergo* the rent has healed, which in reality is nothing but the subsidence of swelling. A wound in any other part of the body would not be expected to heal under like circumstances. No surgeon would anticipate union, much less primary union, in a wound subject to more or less motion of its two surfaces, and constantly bathed by a purulent decomposing discharge. Yet not a few of the later authors and teachers of obstetrics advocate even now this plan. No doubt this may be for the interest of the gyn-

aecologist, for the patient will some day if she be able, pay a handsome fee for its closure, to cure a prolapsus uteri or rectocele. Dr. Emmett thus tersely puts it. "In the interest of the profession delay in closing the laceration was advisable, but the interest of the patient required that it should be closed as soon as possible after the child was born. The cause of this diversity of opinion and practice, is due to two factors: first, the influence of traditional teaching, and second, that the obstetrician does not see the result of this let alone method of treatment, as does the gynaecologist. It is such men as Thomas, Emmett, Skene, and others, who are unmistakable in their advocacy of immediate closure.

It is an interesting and significant fact that the first attempts at repair of this injury were undertaken upon those that had recently taken place; such were the operations of Ambrose Paré and Guillemau. Dr. Bantock uses this strong language in reference to the immediate operation. "I have no hesitation in affirming that if the injury were immediately attended to—the remote operation would very seldom be required, and we should almost banish from the list of the gynaecologist, a number of female complaints such as cystocele, rectocele, and prolapsus uteri." While this is a very sweeping statement, yet in the main I think it is correct.

The primary operation is one that is very simple of execution, and is not to be compared with the remote. The merest tyro in surgery should be able to introduce the three or four sutures that are required, silver wire is the best, but if that be not at hand horse hair or silk answers nearly as well, and certainly for the want of materials we need never postpone or abandon the operation. Darning needles, which are to be found in every house, are the best for either primary or secondary operations. The cardinal rule is *to coaptate the parts as closely as possible*; being sure to pass the sutures deep enough to restore the perineal body and not the integument and superficial structures alone, introducing the needle from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch from the edge of the wound. There is one very important reason why these cases should be attended to at once, and that is, after time the parts, particularly the muscular structure, from want of use, becomes atrophied, and it is almost, if not absolutely impossible, to restore them to their natural state, and in addition to this in secondary operations, we have to denude the parts, which removes considerable tissue from the very locality where we most need it. Shall we operate upon all cases at once?

I would say in reply, as a rule, Yes. The general condition of your patient must be the determining factor.

To conclude, rupture of the female perineum has not received from the profession at large, the attention that its influence upon the health, happiness, yes, and even indirectly upon the life of our patients, that attention its importance demands. That occurring frequently, to the very best men of the profession, its occurrence should not be looked upon either by patient or doctor, as necessarily reflecting upon his professional ability or skill ; but that after having used those means which are best adapted to the case in hand for prevention, no blame should attach if rupture takes place. But on the other hand, that the man who fails to recognize it when it has occurred, has not completed his whole duty to his patient and is unfit for the grave charge she has committed to his care. That in view of the weight of opinion as expressed by a large proportion of the best men in this country and abroad, it is our duty where practicable to close these injuries at once. If in the slightest degree this imperfect effort of mine shall contribute to a better practice in this field of work, I shall have my highest gratification.

ESSAY.

TRANSMISSION OF BOVINE TUBERCULOSIS FROM INFECTED MILK.

BY NOAH CRESSY, M.D., V.S., PH.D., HARTFORD.

In every department of physical science there are certain facts which underlie all possible deduction. Every conclusion, therefore, worthy of scientific recognition must be based on said facts and serve as an explanation of them. Accordingly, an accepted theory among scientific men is but the rightful interpretation of all existing facts in relation to the subject. Natural philosophy, chemistry, and biology are teeming with illustrations of such established principles, many of which, however, were cautiously received until amply demonstrated by renewed investigation and experiments.

The careful consideration of the merits of our theme, therefore, leads us into one of the most alluring fields for scientific investigation that now awaits the pathologist; for nowhere in the struggle of life against the manifold causes of disease do we more effectually imperil our health and happiness than in partaking of animal food of an infectious character.

In fact the relation of man to the lower orders of animals, which has caused so much speculation among philosophers and naturalists on certain zoological affinities, is equally interesting and instructive in a pathological point of view. The skeleton framework and internal organization of the higher mammalia are not only morphologically identical with that of man, and thus subserve the same purpose in the animal economy, but the blood is similar in chemical composition, contains the same anatomical elements, and is subject to analogous changes in disease. Hence the liability of transmitting to the human subject some virulent blood-poison or

other morbid product through the medium of our animal sustenance.

The infected condition of some of our milk supplies already indicates the solution of certain vexed questions on the origin of consumption, that have long been a stumbling-block to the medical practitioner. The investigation of this malady, therefore, in all its varied relations to man and animals is a work of vast importance, and one which the age now urgently demands. Consequently there is no subject of more importance to the public health or better calculated to enhance the cause of sanitary science than the practical study of

BOVINE TUBERCULOSIS.

Though many inquiries have been made in this direction, and valuable conclusions reached, yet the interest in the subject which medical men have thus far taken is not commensurate with its pathological significance. But the hour has come when the sanitarian and physician must join hands with the veterinary profession to explore certain realms in the causation of disease, and thus more accurately survey those boundary lines in pathology which now seem to separate the human maladies from those of our food-producing animals.

Seven years ago,* after repeated opportunities for observations on the subject, I called public attention to the prevalence of this malignant disease among our dairy stock, that I found was not generally recognized; and I now affirm, with renewed assurance, in a pathological point of view, that its baneful consequences from the use of infected milk is not surpassed in the whole catalogue of contagious affections. But as this phase of the malady is comparatively new in the annals of veterinary cure, its clinical history and pathology has not received that attention which the importance of the subject requires. In fact, few are aware to-day of the extent to which this insidious trouble prevails among our neat stock, but the rapid strides which it has made, and the hold it has already gained, observes a well-known veterinary author, renders it one of the most important questions affecting the bovine species.†

That the disease is now rapidly on the increase no well-informed veterinarian can deny. It ranks among the few great scourges of the land; and though our losses in live stock property have been largely due to other plagues which sweep their victims off in a

* See my report as State Veterinary Surgeon for 1874.

† See Prof. Walley's *Four Bovine Scourges*, with an Appendix on Inspections of Meat, etc., Edinburg, 1879.

summary manner, yet the ravages of tuberculosis can only be realized, says Dr. Walley, when we take into account the worst deterioration, the slow but certain decimation of many of our best herds, the infection of our milk supply, and therefore the danger to human life, which can no longer be considered chimerical. Still there are many who from want of knowledge on the subject even doubt the real significance of this *fell* destroyer, and thus ignore its deadly meaning; but when we see thousands of these tubercular deposits in a slaughtered animal, and the udder involved, we are forced to conclude that the milk from all such cows is diseased and of a dangerous character. Yet it is rare that an animal in this country is financially hurt from this complaint; for the cow that coughs, grows poor by degrees, even on the best feed, and at last fails of her milk, is frequently turned over to the butcher as the last resort.

CHARACTER OF THE DISEASE.

The relation of bovine tuberculosis to public hygiene was probably first suggested by Prof. Chanseau of the Lyons Veterinary School, who, thirteen years ago, had already indicated the real source of danger from the use of consumptive beef and milk. In fact the *contagious* nature of this disease, as shown by recent experiments on animals, can no longer be doubted, and it is now conceded by comparative pathologists that the bovine form of this disease is identical with that of man. Consequently there is great liability of its transmission, either by inoculation or ingestion. In fact, it has repeatedly been produced in rabbits, Guinea-pigs, and calves by feeding them with tuberculous matter. Prof. Gerlach of the Berlin Veterinary School claims, as the result of his researches, that this disease in cattle is very infectious, that the presence of a *specific virus* is evident, and that even the flesh of such diseased animals under certain circumstances, and also the *milk*, possess *infective* properties, though to a less degree than the cheesy matter from the lungs.

In relation to its infectious character, George Flemming, F. R. C. V. S., Veterinary Inspector to the British Army, says, in a recent editorial:—"That the tuberculosis of cattle is a *transmissible* disease, and can be conveyed not only to animals of the same but also to those of other species in various ways, is now an *established fact*, upon the recognition of which we have for many years insisted; and, since we first called attention to it, some of the best pathologists in Europe have furnished additional testimony as to the readi-

ness with which this transmission takes place, not only by *inoculation* or *ingestion*, but also, it would appear, by *cohabitation* of diseased with healthy animals.*

Two years ago Professor Colin of the Alfort Veterinary College contributed a series of observations on the *communicability* of the bovine virus, which threw a flood of light on the pathology of this affection.

Several prominent German and Italian authorities have also published their clinical experience in this direction; and lastly we have the celebrated Professor Orth of Gottingen, furnishing the results of his researches and experiments. All of these are only confirmatory, however, of what has now been stated, but this confirmation is not without its value, especially in this emergency, when public opinion needs educating on the sanitary conditions of our meat supplies.

In his experiments, fifteen animals were fed with tuberculous matter from a diseased cow, and nine of those were infected, of which four died. The remaining five, becoming extremely emaciated, were killed. On examination nearly all the organs of the body were found involved in tuberculosis. In all the lungs were affected, but the serous and mucous membranes, the lymphatic glands, the liver, spleen, kidneys, and omentum were infected in different degrees. Consequently, the transmissibility of this affection to animals being proved, he insists that its transmission to man is possible, and has undoubtedly many times taken place from diseased milk.

In fact, the wide prevalence of this disease among our native herds and thoroughbred stock, calls for renewed energy on the part of the medical profession throughout the country. Our infant population, and even adults, who are already rendered more or less infirm by their unhealthy surroundings and neglect of domestic hygiene, are now rapidly falling victims to this infectious malady, especially in our larger cities, as statistics show. Hence, in a moral point of view, this extensive invalid class should be protected. The subject, therefore, now demands the careful attention of our public authorities and of every sanitarian in the land.

In the absence of statistics, it will be impossible at the present time to estimate with any degree of accuracy the enormous extent to which this disease prevails among our dairy stock. But, if our calculations can be based upon the inspectors' reports in Italy,

* *Veterinary Journal*, December, 1879.

Bavaria, and other German states, we must conclude that *five* per cent. at least of our bovine animals are now affected, and with every facility for its rapid increase. Dr. Law, from his extensive observations, claims that in certain districts *thirty* per cent. of the cattle suffer from tuberculosis, and with many high-priced herds this scourge yearly claims its victims.

HEREDITARY TRANSMISSION.

There is seemingly a strong predisposition in neat stock for the production of this disease, and they are far more frequently affected than other domestic animals. The temperament and physical confirmation undoubtedly contribute much to its development; for animals of a phlegmatic type, with an attenuated form, long limbs, and narrow chests are usually the first victims of the malady. Breeders should therefore strive to avoid the possibility of transmitting such diseased qualities. It is more frequent in cows than in oxen, and especially those kept in dairies for a length of time. Hence lactation is believed to be a *predisposing* though perhaps an exciting cause. The condition also in which animals are kept is no small factor. The cold, damp sheds, the dark, underground stables, and other ill-ventilated abodes, as well as the character of the food, all conspire to rekindle those constitutional taints into morbid activity.

If we inquire further into the causes of the increased susceptibility to the infection, as seen more especially in our thorough-bred stock, we shall find that heredity and multiplied consanguinity play no secondary part. Any physical weakness which the sire or dam may possess is liable to be transmitted to the immediate progeny, but if one generation escapes, the trouble may appear in the next, in accordance with the well-established principle of atavism. Diseased conditions are also inherited; and I believe that there is no predisposing cause which exercises such a potent influence in the production of tuberculosis as the pernicious system of in-and-in breeding. Thus from parent to offspring, from one generation to another, we often see the fatal tendency transmitted in unbroken succession, and the more complicated the relationship becomes, the greater is the virulence of the resulting products. In spite, therefore, of the many palpable examples of this broken law, some breeders still pursue, year by year, the suicidal policy of clinging to *one strain*, regardless of the impending consequences.

In alluding to this subject Prof. James Law, F. R. C. V. S., of

Cornell University says, "That the *esteemed* qualities have been preserved, strengthened, and increased in this way there can be no doubt, but there can be just as *little* doubt that any inherited weakness or disease has been often transmitted and even intensified. I could mention particular families in our highest-priced breeds in which *tuberculosis* has become a fixed character;" and further on he observes that "excessive weakness and stupidity of the young is another common result of in-breeding."* Thus we shall find that this insidious and malignant malady, soon to be recognized as *the dreaded* scourge of our land, is now being disseminated in every direction through the consanguineous infection of our thorough-bred stock.

According to Professor Cohnheim, of Leipzig, this hereditary taint, or *phthisical habit* of body, so called, has nothing to do with a tendency to receive the virus, but is, in fact, a *product* of the disease. Individuals, therefore, possessing such a constitutional trait are not *more* disposed than others to receive the infection, for they are *already* tuberculous; and he claims that this virus can be transmitted to the offspring in the generative process, on either side.†

The virus in hereditary cases may lie dormant for several years, awaiting some necessary exciting cause. Every one, therefore, has this *tuberculous* tendency in whose body the virus has taken root, either from its contraction in *early* life or from inheritance.

HISTORY OF ITS INOCULATION.

In 1865 Prof. Villemin of the Val-de-grace Hospital, Paris, having conceived that human consumption in certain cases might be due to a specific virus introduced into the system, resorted to a series of experiments on animals to test the question. He was the first to demonstrate the contagiousness of tuberculosis by *inoculation*. Rabbits and Guinea-pigs were selected, and the material employed was from the human lung. Inoculations were made in various parts of the body, but the results were uniform and of a serious character. Many of the creatures died; others, lingering in a depressed state, were killed, when well-marked tubercular de-

* Report of Am. Public Health Association, New York, 1875, vol. 2, page 250. The *italics* are ours.

† See translation of Cohnheim's able paper on the subject, in Dr. Cullimore's Consumption as a Contagious Disease, London, 1881.

posits were found in all, especially in the lungs, and with more or less infiltrations in the other organs, thus showing that the disease had been transmitted.

These results, which gave him so much renown as a pathologist, led him to experiment with tubercular matter from other animals. Desirous, therefore, of testing the nature of the disease in cattle, he inoculated a rabbit with matter from a cow. The animal became emaciated, and in six weeks was destroyed. Its lungs were filled with hard, tubercular masses, and some of them had taken on a cheesy aspect in the center. The other organs of the body were affected in a similar manner as those in the previous experiments. Hence he concludes that bovine phthisis is *identical* with that of man.

Dr. Villemin has likewise demonstrated that the tuberculous matter produced artificially by inoculation possesses the same power of transmissibility as when the malady arises spontaneously, —thus proving conclusively that in tubercle resides a special, elaborated virus which does not lose its identity by several removes, any more than small-pox.

This view of the subject is corroborated by the pathological researches of Dr. Lionel Beale of London, the celebrated microscopist, who declares that tubercle is a minute particle of living matter, and if inoculated under favorable circumstances it is almost sure to grow, multiply, and produce other morbid cells like that from which it was derived. Furthermore, Villemin has always considered tuberculosis a *specific* malady, for he found that a very small wound and an inconsiderable quantity of matter used was a manifest proof that the intensity of the disease is independent of the *quantity* of the matter inoculated, and that the number and extent of the internal lesions have no relation to those at the seat of puncture. A disease, therefore, that can be transmitted from one animal to another by inoculation and thus an identical virus reproduced is, strictly speaking, *contagious*.

TRANSMITTED BY INGESTION.

Further and more convincing proof of the transmission of tubercular virus has been furnished by Prof. Chauveau, who for years has been experimentally studying the intimate pathology of the various contagia.* The success of his researches has afforded

* See Fleming's able memoir on the history of these investigations in the 48th and 49th Vols. of *The Veterinarian*.

some startling results pertaining to the use of diseased meat. The discovery, also, that certain rich virulent matter can infect as readily through the digestive organs as by any other channel has given him a world-wide reputation; and his well-designed experiments on cattle, which he instituted in 1868, have settled for ever among comparative pathologists the question of the virulency of tuberculosis.

He purchased four calves the 18th of September, from a locality where this disease was unknown, which, upon rigid examination, were found to be in fine, healthy condition. The next day he administered an ounce of tubercular matter from an old cow's lung, including the hard and soft varieties, prepared in the form of a drench and given in divided doses. The first one, a year old, began to lose condition in about a fortnight, the respirations were quickened, though the appetite remained unimpaired. On the 5th of October he gave this calf another dose, but of different and more recent matter, and within a week the symptoms of tuberculosis were apparent. Emaciation proceeded rapidly, the coat became rough and staring, and the animal had occasional fits of coughing, especially after drinking.

The second calf, six months old, had on the fourth day a profuse and fetid diarrhoea, but of short duration, and the animal remained apparently healthy for three weeks. But the characteristic symptoms, as in the other case, soon appeared, with enlargement of the glands about the throat. The third one of the same age, having shown no signs of disease, was drenched again October 9th with another kind of matter, but this calf longest resisted the action of the virus, and not until the 25th was there any appreciable derangement of health; but from that time, however, the phenomena of tubercular infection ensued with amazing rapidity, and in a week the calf could scarcely be recognized.

At the close of the experiments, November 10th, the miserable aspect of the three infected creatures; when contrasted with the thriving condition of the fourth, left no doubt in the mind of even the casual observer as to the changes that had taken place. The post-mortem examinations revealed a perfect generalized form of tuberculosis, with the local lesion of the bowels, *tuberculosis mesenterica*, shown in a marked degree, some of the glands being as large as a man's fist. The morbid deposits in the chest cavity, also, were none the less remarkable. The lungs were studded with crude

tubercles, some forty in number, varying in size from a pea to a filbert. The bronchial glands were also involved, but the liver, spleen, and kidneys were not affected.

Thus, in the space of fifty-two days, we had three typical examples, nearly uniform in appearance, of the artificial production of the malady through the digestive organs. In presence of these facts, therefore, I trust that all inquirers after facts will conclude with our illustrious pathologist that the contagious properties of tuberculosis are now demonstrated beyond a doubt.

CONTAGIOUS FROM EXPOSURE.

The fact that cattle have contracted this disease through the feed, as shown by experiment, gives us an additional source of danger, for creatures confined in the same stable or pasture, and drinking from the same ponds or troughs, are constantly liable to swallow some of this virus in the mucous discharges from the nostrils of their affected comrades. In fact it is never safe to put another animal in the same stall where one has sickened and died of this complaint without thoroughly renovating the apartment. Nor would I allow an affected creature to mingle with the healthy stock about the yard.

The observations of Dr. Grad, veterinary surgeon at Waselonne, Alsace, on the spread of this disease by contaminated stalls, are very conclusive. On different occasions owners had informed him that they had lost several animals from consumption *in the same stall*. At first he did not attach much importance to the matter, but one day, when visiting the stables of an extensive farmer in Leinheim, he was informed that annually for the last five years one of the cattle had died of tuberculosis in a certain stall. The last one he had the opportunity of examining, which had been there but ten months, but had all the symptoms of the malady, greatly emaciated, and troubled with a cough. Dr. Grad's attention was strongly aroused at such a state of things, and to test the matter scientifically he was allowed to select an animal for an experiment. Accordingly he chose from another stable a three-year-old heifer, in calf, that was to all appearances perfectly healthy. She was bred on the farm, had never been unwell, never coughed, and none of her progenitors had ever been affected with phthisis. The cow remained quite well until after calving, when a slight cough appeared; but it increased in frequency, emaciation gradually set in, with all of the symptoms of

tuberculosis, and in twelve months the creature was a mere shadow of her former self. The evidence therefore in support of this mode of infection Grad could no longer resist, as this was the sixth case that had occurred in this stall. Hence he very naturally inferred that the disease was probably transmitted by the ingestion of tuberculous matter expectorated by the cattle which had previously occupied the place.

The extension of the malady by cohabitation is therefore always liable to occur when animals are so arranged in the stable that the sick and healthy ones can get their heads together, or feed from the same manger. The hay may thus become contaminated, and the infection takes place through the digestive organs. The expired air also is not unfrequently so laden with virulent matter, especially in the advanced stages, that it is not safe for another animal to inhale it. This mode of transmission, which was first suggested by Dr. Morgagni* more than a hundred years ago, and has found many advocates among physicians and veterinarians, has now been confirmed by the experiments of Dr. Tappeiner of Meran, in causing animals to inhale the fine particles of tubercular matter from the air of a room in which the virus had been evaporated by a steam atomizer. Out of eleven puppies experimented on, ten showed well-marked miliary tubercle in both lungs on being killed within twenty-five to forty days—thus proving that this disease is contagious by the breath.

THE MILK INFECTIOUS.

That the milk of tuberculous cows is absolutely infectious and contains a *specific virus* that can be transmitted from one species of animal to another and also to man,† has now been demonstrated by hundreds of positive experiments, thus proving the *identity* of this bovine malady with that of the human subject. Dr Bromley of Lancaster, England, found characteristic tubercular lesion in the pulmonary organs of two pigs that had been fed with milk of a consumptive cow; while the sow, on being slaughtered, exhibited no signs of the disease. Hence the pigs could not have contracted

* Nature and Cause of Disease, London, 1769.

† The fact, as shown by Fox and others recently, that but 25 per cent. of the cases of consumption in man are due to hereditary transmission, while the other 75 per cent. are caused by unsanitary influences, gives increased interest and importance to all other methods by which tuberculosis may be caused. The origin of more or less of this large percentage is doubtless due to infection from milk or meat.—C. W. C.

it by any hereditary influence, but the morbid material must have been taken in with the milk.

There is every reason, therefore, says Fleming, to *prohibit* the use of milk from cows affected with tuberculosis, and especially for *infants* who mainly rely upon this fluid for their sustenance, and whose powers of absorption are very active. Even if it did not possess infective properties, its deficiency in nitrogenous elements, fat and sugar, and the increased proportion of earthy salts, would alone render it an objectionable article of diet. In fact, it has long been known that it was liable to produce diarrhœa and debility in infants; but though many children fed on such milk have died from tuberculosis or a localized type of it in the bowels known as *Tabes mesenterica*. the part probably played by this liquid in its production has rarely been suspected.

He further observes, also, that, as the commencement of phthisis is generally so insidious in the human species, it is most difficult to arrive with any degree of certainty at the causes which directly induce or favor its development; but, from the evidence before us, it is to be feared that at least one of its sources must be referred to the utilization of the *carcass*, but more especially of the *milk*, of phthisical cattle as food.*

The recent investigations of Prof. Otto Bollinger of the University of Munich, on the artificial production of tuberculosis as induced by the consumption of diseased milk, has thrown additional light on the subject. He claims that the milk of such animals has a pre-eminently *contagious* influence, and reproduces the disease in other animals experimented on from that point of view. He believes also that such milk, even when *boiled*, still retains its injurious properties. Further, he maintains that beyond doubt the tuberculosis of the human subject, though not completely identical with that of the cow, is yet strictly analogous to it, and that consequently the *wide prevalence* of tuberculosis in the native herds, at least 5 per cent. of which are affected, is a standing danger to health of the community.

Seeing the enormous mortality from consumption, more especially in towns, Prof. Bollinger believes it to be of the utmost importance to urge upon all classes, and particularly upon *farmers*, the absolute necessity of taking every possible means of *stamping out* the disease among cattle. Meanwhile some measure of safety may be secured by the rigid exclusion of all *diseased stock* from

* From *The Veterinarian*, vol. 48, p. 202.

town dairies, a measure which forms a prominent feature in the programme of the recently-established Associated Dairy at Munich, where all the cows are constantly kept under skilled veterinary surveillance, and any that may exhibit the least symptom of tuberculosis are at once weeded out.*

The traffic in tuberculous animals, in this country, has now become so extensive that the State ought to control this matter by more active legislation. The public health has become involved, and the importance of a vigilant inspection, to thus protect our lives and health against this invasion of disease can no longer be questioned. My attention has been called to this subject many times within the last few years, and recently even beyond the borders of this State. Hence, I have felt it my duty to thus publicly warn our people against the baneful practice of consuming the meat and milk of such diseased animals.

The sanitary supervision of this subject, therefore, will call for candid consideration and the deliberation of our most enlightened minds to devise and enforce such measures as will protect our tables, control this traffic, and stamp out the disease.

* *Veterinary Journal*, February, 1880.

OBITUARIES.

EDWARD BULKLEY, JR., M.D., NEW HAVEN.

BY JOHN NICOLL, M.D., NEW HAVEN.

He was the son of Edward and Lucy Bulkley, was born in New Haven, Ct., May 15, 1833. He studied medicine with the late Dr. N. B. Ives, and graduated from the medical department of Yale College in the year 1856. He practiced in New Haven until the year 1861, when he was appointed assistant surgeon of the 6th Conn. Regiment. After three years of service with his regiment, he was appointed volunteer surgeon in the U. S. army, and assigned to duty on a hospital transport from Charleston to New York. After six months' service on the water, he was assigned to hospital service in Washington, where he remained until the close of the war, and was honorably discharged. He then resumed his practice in New Haven, and soon after was married to Miss Grace B. Bishop. Dr. Bulkley was a cautious, watchful practitioner, entirely devoted to his patients. During the summer of 1877, he was much prostrated by heat and overwork, and from that time his health commenced to fail, when, becoming satisfied that his brain would no longer bear the strain, he gradually yielded to the power of disease, and withdrew from the active practice of his profession. After a year of great suffering—mental, as well as physical—he entered into rest Nov. 5, 1880. He left a wife and five children.

FREDERICK J. FITCH, M.D., MERIDEN.

BY N. NICKERSON, M.D., MERIDEN.

Dr. Frederick J. Fitch was born in Chester, Vt., on the 17th of September, 1842. He was a son of Addison Fitch of that place, a nephew of Hon. E. W. Stoughton, late minister to Russia, and a cousin of Brig. Gen. Stoughton of the Union Army.

He studied medicine with Loren G. Whiting, M.D., of his native place, and graduated at the Bellevue Hospital Medical College in 1865. While pursuing his studies with Dr. Whiting, the War of the Rebellion broke out, and, following the martial instincts of his family, on the 22d of October, 1862, he entered the army as Hospital Steward of the 16th Vermont regiment, commanded by his cousin, Col. Stoughton.

On July 2, 1864, he received an appointment as Medical Cadet, a provisionary corps, attached to the regular army, and served in various general hospitals until May 3, 1865, when he was commissioned as Acting Assistant Surgeon, and ordered to Mobile, Ala.

In the fall of 1865 he came to Meriden, Conn., to survey the field, and settled permanently here in January, 1866.

After two years of severe and faithful work, gaining for himself a remunerative practice and an increasing circle of friends, he began to suffer from the effects of malarial poisoning, in the form of spinal congestion, attended by a decided tendency to paralysis, which compelled him to suspend all professional work early in 1878. Following the advice of physicians of eminence, he went to Colorado in the spring of that year, returning after a few months with no benefit. The following year and a half he spent by the seashore in Maine and Massachusetts, and in Brooklyn, L. I., but with gradually increasing debility, during the last year of his life developing the symptoms of Bright's disease of the kidney, which finally terminated in uræmic convulsions, April 25, 1881.

Dr. Fitch was a man of sterling worth, and of unimpeachable professional honor. During the time he passed in Meriden, he served as Alderman in the Common Council, Physician to the Almshouse, Surgeon to the Consolidated Road, etc., all which positions he filled with more than usual ability. As a practitioner, he was judicious; as a counselor, clear and decided; as an associate, honorable. Believing that the true mission of the Profession is the saving of human life, he scorned to resort to questionable means to gain eclat or pecuniary success.

Faithful to his patients, devoted to his friends, honest and consistent in his convictions, calm in emergencies, brave in adversity, cheerful in sickness, unflinching in the face of approaching death,—all this and more, I, who knew him well and loved him much, can fully attest.

LUCIUS NICHOLS BEARDSLEY, M.D., MILFORD.

BY GEORGE L. BEARDSLEY, M.D., BIRMINGHAM.

Love is seldom chary of her offerings to the dead. No flowers are too dainty for the bier, few words are too learned to swell the worth of departed kin or friend. The graces of the dead are like their kisses, long held dear, and the effusions of esteem and grief are like incense, the choicest of all tributes. That grave is little that has escaped the orator. There are, however, lives that need no encomium, characters so sterling and notable that they discount the finished eulogy. There are those who do not die, who live on in the models of self-denial and probity they have chiseled. The rewards that are vouchsafed in the service of duty or that succeed the proofs of integrity are not all stored in heaven. The influences that survive us are well worth earning. The good remembered of us is not a sorry premium for right living. The virtuous and well disposed write their own epitaph, and those who practice what the departed taught eulogize them best.

To sketch the career of those who have illustrated perseverance, prudence, and decision, to study the methods of those who labored to be useful, to honor the healthy ambitions which have spurred the manly to success, to embalm the good which a pure heart and a forgiving spirit can elaborate, to treasure up those nice elements of conduct which make the true gentleman, to admire the fruits of a genius rich and cultivated, the review of a noble record is surely no courtesy to a custom, but a guide to well-doing and an incentive to us to emulate those qualities of mind and heart which gave merit to the subject of these memoirs and now makes his memory sweet.

Lucius Nichols Beardsley was born in Monroe (then Huntington, parish of New Stratford), Conn., Oct. 8th, 1814, being the only son of Agur and Lucinda Beardsley. His only sister survives him.

He received his early education chiefly at the Monroe Academy, a classical school of which his uncle, Samuel B. Beardsley, Yale, 1815, was principal for nearly twenty years.

He commenced the study of medicine somewhat early in life under competent instructors, and finally entered, as a private pupil, the office of Dr. Eli Ives, of New Haven, then Professor of the Theory and Practice of Medicine. He always felt under

great obligations to Dr. Ives, entertained for him the greatest respect and affection, and considered him as a father in the profession. He was graduated as M.D. at Yale College in March, 1838, and settled in Milford the same month.

Owing to the generous confidence and patronage extended towards him at once by the people in Milford, he established a practice, general, and somewhat extensive, sooner than most young physicians. Although his professional services were related principally to Milford and its vicinity, reference to his journal indicated that his field of observation was wide and his experience and suggestions highly esteemed in council.

He was early admitted into the New Haven County Medical Society, was chosen on several occasions Dissertator, and was specially appointed and invited to prepare and read before the Society an account of the Dysentery as it appeared in the summer and autumn of 1844. This paper was received with marked favor. Dr. Beardsley was several times elected Fellow of the State Medical Convention, and was also elected President of the New Haven County Society. The use of ether as an anæsthetic agent was discovered after his settlement in Milford, in which subject he took great interest, being among the first, at that time, to give ether a trial in minor operations; and he was particularly desirous, as a matter of justice, that the unfortunate Dr. Horace Wells should receive the honor and the reward as the discoverer. This appears from resolutions read by him at the State Convention held at Hartford in 1853. He was elected delegate from the State and County Medical Societies, and attended the sessions of the American Medical Association at Boston, New York, Philadelphia, Washington, Chicago, and elsewhere. At the meeting of the National Association in New Haven, in 1860, which was the only convention of the Society ever held in this state, Dr. Beardsley served as chairman of the Connecticut delegation, and was thereby in a position to be largely instrumental in securing the nomination and election of his old friend and preceptor, Dr. Ives, to the high office of President of the American Medical Association. At the next convention of the Association, which occurred at Chicago in 1863, Dr. Beardsley was again preferred chairman of the Connecticut delegation, and as Dr. Ives had died since the last gathering, an "in memoriam" was offered by him, which resolutions were commended and unanimously adopted.

For a period of twenty-five years, Dr. Beardsley was a sub-

scriber to the Boston Medical and Surgical Journal, and an occasional contributor to its columns. He wrote and had published in that Journal a monograph of the diphtheria as it appeared in Orange in 1859. This article was copied into a number of the leading journals in the country, and has always been viewed as authority on this disease.

In 1877, owing to failing health, he relinquished practice, so far as possible, and sought by retirement and frequent sojourns in a southern climate to regain that vigor which a constant practice had severely taxed. His hopes and the expectations of a wide circle of friends were to be brought to nought, and on his return from Nassau and Florida in April, '80, it was quite evident that his course would soon be finished. As his strength waned, a tranquillity of mind and fortitude amid pain made the evening of his days serene and none came within his audience who were not touched by that perfect content with which he awaited the consummation of the Father's will. He entered the haven of rest on the morning of the 22d of November, 1880.

As a practitioner, Dr. Beardsley was possessed of a remarkable measure of common sense and cool judgment. His diagnoses were always reached without the bias of preferred theories, and his methods of determining the cause of a disorder would often suggest a decidedly logical leaning to his thought. To this habit of confirming premises and cautiously reaching opinions, is to be referred the weight that his persuasions carried in medical circles. His tact as an accoucheur, was widely known and won for him flattering encomiums from his brethren.

As a scholar, his acquaintance with general as well as medical literature was expanded far beyond that degree with which physicians in active practice are generally favored. Dr. Beardsley commenced the study of Latin early, and became quite proficient in rendering those authors. His zeal to be an expert practitioner led him to follow closely every new revelation of science in medicine, or to verify fresh suggestions, or recent appliances of surgery.

Dr. Beardsley's wit, which was always refined and without malice, combined with an ease of declamation and a fertility of expression, always made him a popular speaker. In every public gathering, political, social, or educational, his voice was heard in the vindication of truth and progress.

As the leading physician in the town and vicinity, and as a prominent citizen, it is not surprising to find that a general con-

fidence was reposed in his convictions and counsels on subjects that were not relevant to his profession. In matters of business, Dr. Beardsley was always respected for his judicious and impartial estimations of the soundness or probable success of this or that project or investment. His opinions were invariably loyal to his belief, and none were ever betrayed by his instructions.

In the social circle, on the street, at home, a flow of sunshine was ever active, and hearts that were in the shade of gloom or were weighted with the weariness of living, were moved to new hopes and resolves by the abundance of his smiles and humor. His words were as his deeds, full of benevolence. His relations to the church, of which he was a pillar and in whose intent he was a firm believer, were the natural tenor of that spirit to be and do good, which permeated every essay of his being. The predominance of sobriety over hot emotion in accepting suppositions gave to his statements on religion, as on worldly matters, that validity and influence which is permanent. Of Dr. Beardsley, it can be broadly affirmed that

He lived for those that loved him,
 For those that loved him true,
 For the heaven that smiled above him
 And watched his coming too—

For the cause that lacked assistance,
 For the wrongs that deserved resistance;
 For the future in the distance,
 For the good that he could do.

Dr. Beardsley was married in 1836 to Betsey Ann Coley, daughter of E. B. Coley, Principal of Union Hall Seminary, N. Y. She died November 24, 1869, leaving two sons, Dr. George L. Beardsley of Birmingham, Conn., and Dr. William E. Beardsley of Brooklyn, N. Y.

In 1874, Dr. Beardsley married Susan Prudden Smith of West Haven, who is a lineal descendant of Rev. Peter Prudden of Milford Colony fame.

BENJAMIN T. ROATH, M.D., NORWICH.†

By E. C. KINNEY, M.D., NORWICH.

Dr. Benjamin Tyler Roath died on the evening of Jan. 8, 1881, at the home of his brother, Capt. Edmund D. Roath, No. 41 Church Street, Norwich, Conn.; after a short but severe and painful attack of double pneumonia, of about a week in duration.

Dr. Roath was born in Norwich, June 11, 1810. He was one of a large family; and, after a close attention to his education in the schools of his native place, he selected for his life work the study of medicine, and entered himself as a student at the Castleton Medical College, from which, after the usual course of lectures, he graduated among the first in his class.

Dr. Roath then went to Albany, N. Y., where he lived for several years under the tuition of the late celebrated Dr. March, with whom he was a great favorite and a constant assistant in his numerous operations. After leaving Albany, he went to Europe as surgeon on a sailing vessel, and spent some weeks in London.

About 1840, he returned to Norwich and commenced practice, devoting himself chiefly to diseases of the eye, in the treatment of which he enjoyed a deserved celebrity. In 1854, he removed to New York, where he remained until 1860, engaged in the successful practice of his profession. About this time, for several trips, he went as surgeon on the steamer Arago, and spent his time in Paris between the trips. In the summer of 1861, he came back to Norwich, where he remained in practice until the time of his death.

Dr. Roath was a man of singular purity of character, of a most generous disposition, and sincerely loved by all who had the good fortune to enjoy his companionship. As an amateur musician he had few superiors, and was a most enthusiastic promoter of everything that tended to the advancement of musical taste and education.

Dr. Roath was possessed of great mechanical ingenuity, and was the inventor of several useful surgical instruments.

Rarely has a man lived with more friends and fewer enemies than the subject of this memoir, and whose memory is more lovingly cherished by a host of mourning friends.

Dr. Roath was never married.

ALFRED H. COATES, M.D., MYSTIC RIVER.

BY A. W. NELSON, M.D., NEW LONDON.

Dr. Coates was born in North Stonington, July 8, 1813, youngest of fourteen children, seven sons and seven daughters, of Amos and Anna Coates. In his early youth the family removed to Sterling, Windham county. There Alfred worked upon the farm during the summer and attended the common schools in the winter, till at mature youth he completed his academic education at Plainfield. After this he taught a country school for several winters.

Early in 1840, he began the study of Medicine with Dr. Thomas P. Wattles of North Stonington, with whom he remained, except during lecture seasons, till graduation, at New Haven, January, 1843. His first lecture course was at the Berkshire Medical College, Pittsfield, Mass., his second and last at Yale College.

After graduation, he remained for one year with Dr. Wattles, when he removed to Poquetannoc, Ledyard, and for eight years had a successful practice.

Then for six months he sought a larger and less laborious field in Brooklyn, N. Y., but heeding the wishes of his wife he practised a year in Norwich, Conn., with the especial favor of the late Dr. Ford of that city. In June, 1853, at the suggestion and request of Dr. E. F. Coates, his nephew, he came to Mystic River, where he lived till his death in 1880, more than twenty-seven years.

He married September 18, 1843, Martha E., only daughter of Deacon John Wheeler of North Stonington. She died in childbirth, March 28, 1846. February 22, 1847, he married Hulda E., daughter of Captain George Sidleman of Poquetannoc. They had three children, one of whom, a son, alone survives. The mother died of phthisis, December 28, 1861. August 2, 1864, he married Harriet N. daughter of Isaac W. Miner of North Stonington. She and a daughter thirteen years old survive him.

Dr. Coates was a general practitioner, attending also to obstetrical business, but not to important surgical cases. For many years he was busy and successful in his profession and acquired a moderate competence. With advancing age, and impaired health, he withdrew somewhat from his chosen pursuit, but very many who no longer called him, remembered him kindly and pleasantly. He was of a gentle manner, and careful in his speech. For many years he was connected with the Baptist Church of Mystic River.

He was an indulgent husband and father, and very zealous for those little attentions that pertain to present comfort and happiness.

Though seen not very many times personally by the writer, yet he is remembered only with pleasure, as somewhat answering to the gentleman of the old school. October 26, 1880, he was stricken with apoplexy and died the next day, aged 67 years, 3 months, 19 days. The writer is indebted to Dr. Coates, the nephew, for many facts in this memoir.

JOHN HILL, M.D., SOUTH NORWALK.

BY W. C. BURKE, JR., SOUTH NORWALK.

Death has again entered the ranks of our profession and called from his labors our honored brother, Dr. John Hill. This is the third that has been taken from us by death within the short space of two years.

Dr. John Hill was the son of John and Chloe Hill; he was born at Sterling, in this state, January 19, 1820. He received his academic education at the high-school of a neighboring town, and was then engaged in teaching for a short time, but having made the practice of medicine his chosen life-work, he at once commenced to prepare himself by entering upon the study of his profession. He first entered the office of Dr. Hovey of Coventry, and afterwards studied with Dr. Wm. Witter of Willimantic. He attended lectures at the University Medical College of New York, from which he graduated in 1845. He at once commenced the practice of his profession in partnership with his preceptor, Dr. Witter of Willimantic, with whom he remained thirteen years, after which he removed to the city of Brooklyn, N. Y., where he resided until six years later he was called to assume the office of resident physician of the New York State Inebriate Asylum at Binghamton, afterwards becoming its Superintendent. He removed to South Norwalk, Conn., in 1869, where he continued in active practice up to the time of his death, which took place on the 18th of September, 1880, from peritonitis. Dr. Hill was married April 23, 1856, to Elizabeth Middlebrook, daughter of Col. George Middlebrook of Wilton, Conn., who with one daughter survive him.

Dr. Hill was a man of great decision of character, slow to form

an opinion, but when once decided was not easily shaken. A clear thinker, he was one who inspired the confidence of those that knew him best.

The profession has lost one of its most honorable and upright members, a man despising pretense in any form, and nowhere more than in the profession he represented, disdaining to stoop to any technical deception for his own emolument.

His tastes led him more especially to the practice of surgery, in which branch he gained some distinction.

A staunch republican, he took a deep interest and active part in local and national politics. He was a frequent contributor to the local press of articles upon temperance and public health. A member of the Congregational church, the Sabbath always found him there unless unavoidably detained. His Christian influence and example were felt by all with whom he came in contact. And his death was deeply lamented by a large circle of friends.

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GILMAN KIMBALL,	-	Lowell, Mass.
FORDYCE BARKER,	-	New York City.
JOHN G. ADAMS,	-	New York City.
JARED LINSLEY,	-	New York City.
A. J. FULLER,	-	Bath, Me.
S. H. PENNINGTON,	-	Newark, N. J.
THOMAS C. FINNELL,	-	New York City.
N. C. HUSTED,	-	New York City.
J. P. WHITTEMORE,	-	Chester, N. H.
WILLIAM PIERSON,	-	Orange, N. J.
ARTHUR WARD,	-	Belleville, N. J.
E. K. WEBSTER,	-	Boscawen, N. H.
P. A. STACKPOLE,	-	Dover, N. H.
S. L. F. SIMPSON,	-	Concord, N. H.
A. T. WOODWARD,	-	Brandon, Vt.
WM. McCOLLOM,	-	Brooklyn, N. Y.
J. C. HUTCHINSON,	-	Brooklyn, N. Y.
BENJ. E. COTTING,	-	Boston, Mass.
HENRY I. BOWDITCH,	-	Boston, Mass.
SAMUEL T. HUBBARD,	-	New York City.
GEO. F. HORTON,	-	Terrytown, Pa.
A. N. BELL,	-	Garden City, L. I.
E. C. SEGUIN,	-	New York City.

PROPOSED FOR HONORARY MEMBERSHIP.

PLINY EARLE,	Northampton, Mass.
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ORDINARY MEMBERS.

The names of those who have been Presidents are in Capitals.

HARTFORD COUNTY.

G. W. SANFORD, M.D., of Simsbury, President.

JAS. CAMPBELL, Jr., M.D., of Hartford, Clerk.

Censors.

P. M. HASTINGS, M.D., M. STORRS, M.D., N. MAYER, M.D.

<p>HARTFORD, G. B. Hawley,* G. W. RUSSELL, David Crary,* P. W. Ellsworth,* E. K. HUNT, J. S. Butler,* J. C. Jackson, A. W. BARROWS, P. M. Hastings, W. H. Tremaine,* Lucien S. Wilcox, Henry P. Stearns, Irving W. Lyon, McLancthon Storrs, Horace S. Fuller, John O'Flaherty, Nathan Mayer, Wm. M. Hudson, George C. Jarvis, W. A. M. Wainwright, David Crary, Jr., Geo. F. Hawley, J. B. Lewis, D. T. Bromley, George P. Davis, C. W. Chamberlain, Jas. Campbell, G. W. Avery, Eli Warner, C. E. Frœlich, John Dwyer, Harmon G. Howe, Joseph A. Coogan, W. T. Bacon, W. W. Knight, R. H. Tiffany,* C. W. Page, T. D. Crothers, Geo. M. Parmele, R. B. Talbot, Ellen F. Hammond, S. B. St. John, Geo. R. Shepherd, F. S. Crossfield, G. B. Packard, M. D. Mann, J. A. Steven, M. M. Johnson, Wm. D. Morgan, J. F. Axtelle, Noah Cressy.</p> <p>AVON, Wm. Howard.</p> <p>BERLIN, E. Brandegee, E. H. Mcad.</p> <p>BLOOMFIELD, Henry Gray.</p> <p>BRISTOL, Henry E. Way.</p> <p>BROADBROOK, H. O. Allen.</p> <p>CANTON, Collinsville, G. F. Lewis, G. R. Roberts.</p> <p>EAST HARTFORD, S. L. Childs,* L. W. McIntosh,* S. B. Newton, E. J. McKnight, W. R. Tinker.</p>	<p>EAST WINDSOR HILL, Sidney W. Rockwell,* William Wood.</p> <p>Warehouse Point, Marcus L. Fisk.</p> <p>ENFIELD, Thompsonville, Edward F. Parsons, Rial L. Strickland,* Geo. T. Finch.</p> <p>FARMINGTON, Frank Wheeler, Chas. Carrington.</p> <p>Unionville, W. W. Horton.</p> <p>PLAINVILLE, T. G. Wright, J. N. Bull.</p> <p>GRANBY (North), Francis F. Allen.*</p> <p>GLASTONBURY, H. C. Bunce, J. E. Griswold.</p> <p>Buckingham, G. A. Hurlburt.</p> <p>South Glastonbury, H. M. Rising.</p> <p>MANCHESTER, (North), R. M. Griswold, F. H. Whiton, C. H. Weaver.</p> <p>South Manchester, J. N. Parker.</p> <p>NEW BRITAIN, B. N. Comings, S. W. Hart, Geo. Clary, E. B. Lyon, J. S. Stone, Erastus P. Swasey, M. J. Coholan, G. K. Welch.</p> <p>ROCKY HILL, R. W. Griswold.</p> <p>SIMSBURY, G. W. Sanford,* R. A. White.*</p> <p>SOUTHINGTON, I. P. Fiske, G. W. Stedman.</p> <p>SUFFIELD, J. K. Mason, William H. Mather.</p> <p>WETHERSFIELD, A. S. Warner.*</p> <p>WINDSOR, S. A. Wilson, Newton S. Bell.</p> <p>Poquonock, R. E. Ensign.</p> <p>WINDSOR LOCKS, S. R. Burnap.—103</p>
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* Over sixty years of age.

NEW HAVEN COUNTY.

A. H. CHURCHILL, M.D., of Meriden, President.

N. NICKERSON, M.D., of Meriden, Vice President.

C. W. GAYLORD, M.D., of Branford, Clerk.

W. R. BARTLETT, M.D., of New Haven, County Reporter.

Censors.

H. A. CARRINGTON, M.D., W. R. BARTLETT, M.D., M. N. CHAMBERLIN, M.D.

NEW HAVEN, E. H. Bishop,* Levi Ives,* P. A. JEWETT,* David L. Daggett, David A. Tyler,* HENRY BRONSON,* S. G. Hubbard, C. A. Lindsley, John Nicoll, Moses C. White, H. Pierpont, Leonard J. Sanford, W. B. DeForest,* F. L. Dibble, T. Beers Townsend, T. H. Bishop, Henry A. DuBois, Francis Bacon, W. L. Bradley, A. E. Winchell, H. A. Carrington, L. M. Gilbert, Robert S. Ives, Evelyn L. Bissell, F. J. Whittemore, Arthur Ruekoldt, Willis G. Alling, Walter R. Bartlett, Walter Judson, Ira S. Smith, D. C. Leavenworth, George B. Farnam, J. F. Lines, Frederick Bellosa, S. H. Chapman, William H. Hotchkiss, J. F. C. Foster, F. O. White, B. S. Lewis, E. L. Thomson, W. H. Carmalt, M. A. Cremin, T. P. Gibbons, T. H. Russell, James J. S. Doherty, F. H. Whittemore, C. P. Lindsley, H. Fleischer, Max Mailhouse, Edward Dwight, M. C. O'Conuor, W. O. Ayres, A. W. Leighton, Wm. B. Graves, James Kingsly Thacher, H. B. Smith, Henry Douteil, C. G. Surridge, G. J. Augur, Wm. Spencer Russell, H. A. Oakes.

Fair Haven, Charles S. Thomson,* W. H. Thomson, S. D. Gilbert.

Westville, J. W. Barker.

DERBY, Charles H. Pinney.

Ansonia, Scott R. Baker.

Birmingham, Ambrose Beardsley,* G. L. Beardsley, T. B. Jewett, T. J. O'Sullivan.

BRANFORD, C. W. Gaylord, Walter Zink.

CHESHIRE, M. N. Chamberlin.

GULFORD, Alvan Taleott,* G. P. Reynolds.

HAMDEN, E. D. Swift, O. F. Treadwell, E. E. Swift, F. W. Wright.

MADISON, D. M. Webb.

MERIDEN (West), Asa H. Churchill, C. H. S. Davis, N. Nickerson, A. W. Tracy, E. M. Child, E. T. Bradstreet, Anna J. Ferris, Geo. D. Ferguson, J. D. Eggleston.

MILFORD, Hull Allen,* Thomas Dutton,* Wm. H. Andrews, E. B. Heady.

NAUGATUCK, A. E. May.

NORTH HAVEN, R. B. Goodyear.

ORANGE, West Haven, J. Martin Aimes, John F. Barnett.

OXFORD, Lewis Barnes.

SEYMOUR, Thomas Stoddard,* S. C. Johnson,* Joshua Kendall,*

SOUTHURBY, A. B. Burritt.*

South Britain, N. C. Baldwin.*

WALLINGFORD, Nehemiah Banks, B. F. Harrison,* J. D. McGaughey, C. H. Atwater.

WATERBURY, G. L. PLATT,* Alfred North, Edward L. Griggs, H. E. Castle, E. W. McDonald, J. J. M. Neville, Walter H. Holmes, Walter L. Barber, C. W. S. Frost, Willard Wolcott. —119

* Over sixty years of age.

NEW LONDON COUNTY.

E. C. KINNEY, M.D., of Norwich, President.

A. PECK, M.D., of Norwich, Clerk.

Censors—I. G. PORTER, M.D., L. S. PADDOCK, M.D.*County Reporter*—L. S. PADDOCK, M.D.

<p>NEW LONDON, ISAAC G. PORTER,* Robert A. Manwaring,* A. W. Nelson, F. N. Braman, J. G. Stanton.</p> <p>FRANKLIN, ASH BEL WOODWARD,*</p> <p>GRISWOLD, George H. Jennings.</p> <p>GROTON, Mystic River, John Gray.</p> <p>LEBANON, W. P. Barber.</p> <p>MONTVILLE, William M. Burchard.</p> <p>MYSTIC, Mason Manning,* Albert T. Chapman.</p> <p>Mystic Bridge, E. Frank Coates, Frank A. Coates.</p>	<p>NORWICH, Elijah Dyer,* Elisha Phinney,* Lewis S. Paddock, CHAS. M. CARLETON, Wm. S. C. Perkins, Patrick Cassidy, E. C. Kinney, S. L. Sprague, L. B. Almy, A. Peck, W. H. Mason.</p> <p>Greenville, William Witter.</p> <p>OLD LYME, George W. Harris, E. D. Griffin.</p> <p>EAST LYME, Elisha Minger.</p> <p>STONINGTON, Charles N. Brayton, George D. Stanton.</p> <p>NORTH STONINGTON, J. D. Nelson.</p>
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FAIRFIELD COUNTY.

WM. C. WILE, M.D., of Sandy Hook, President.

F. M. WILSON, Jr. M.D., of Bridgeport, Clerk.

Censors—W. A. LOCKWOOD, M.D., C. H. BILL, M.D., G. F. LEWIS, M.D.*County Reporter*—W. A. LOCKWOOD, M.D.

<p>BRIDGEPORT, David H. Nash,* ROBERT HUBBARD, Andrew J. F. Smith, Augustus H. Abernethy, Geo. F. Lewis, Jas. R. Cummings, George L. Porter, Robert Lauder, Francis J. Young, Curtis H. Bill, N. E. Wordin, G. M. Teeple, Chas. W. Sheffrey, E. T. Ward, F. M. Wilson, T. F. Martin, W. H. Bunnell, F. B. Downs, B. W. Munson, Mary J. Rising, W. C. Bowers, W. J. Wakeman, F. A. Rice, J. D. Bragg, J. W. Wright.</p> <p>BROOKFIELD, A. L. Williams,*</p> <p>DANBURY, E. P. Bennett,* James Baldwin,* Wm. C. Bennett, F. P. Clark, A. T. Clason, William F. Lacey, H. G. Wildman, A. E. Adams.</p> <p>DARIEN, Sam'l Sands, R. L. Bohannan.</p> <p>MONROE, A. W. Lyons.</p> <p>NEW CANAAN, Wm. G. Brownson.</p> <p>BETHEL, A. D. Barber.</p> <p>Greenfield Hill, M. V. B. Dunham.</p>	<p>FAIRFIELD, S. M. Garlick.</p> <p>NORWALK, James G. Gregory, W. A. Lockwood, Jno. C. Kendall, Robert Nolan, F. V. Brush, E. C. Clarke, Geo. W. Benedict, Henry Hungerford.</p> <p>South Norwalk, R. L. Higgins, W. C. Burke, Jr.</p> <p>RIDGEFIELD, O. S. Hiekok, Wm. S. Todd.</p> <p>READING, M. H. Wakeman.</p> <p>Southport, C. H. Osborne.</p> <p>STRATFORD, Edwin D. Nooney, Almon S. Allen.</p> <p>STAMFORD, H. P. Geib.</p> <p>North Stamford, W. H. Trowbridge,</p> <p>STEPNEY, Seth Hill.</p> <p>TRUMBULL, Thos. Reid.</p> <p>WESTON, F. Gorham.</p> <p>WESTPORT, George B. Bonton, F. Powers.</p> <p>HUNTINGTON, Gould A. Shelton.</p> <p>Sandy Hook, Wm. C. Wile.</p> <p>WILTON, S. H. Huntington, A. B. Gorham.</p>
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WINDHAM COUNTY.

H. W. HOUGH, M.D., of Putnam, President.

R. ROBINSON, M.D., of Danielsonville, Clerk.

Censors—S. HUTCHINS, M.D., T. M. HILLS, M.D., LEWIS WILLIAMS, M.D.*County Reporter*—J. B. KENT, M.D.

ASHFORD, John H. Simmons,*	PUTNAM, H. W. Hough,* John Witter, John B. Kent, Omer LaRue, F. X. Barolet.
SOUTH CANTERBURY, Elijah Baldwin.*	THOMPSON, LOWELL H O L B R O O K, E. T. Morse.
HAMPTON, Dyer Hughes,* C. Gardner.	WESTFORD, Farnam O. Bennett.
KILLINGLY, Ashael E. Darling.	East Woodstock, John Cotton.
West Killingly, Samuel Hutchins,*	West Woodstock, A. S. Leonard.
R. Robinson, Thomas Graves.	WINDHAM, E. Huntington.
East Killingly, Edwin A. Hill.	South Windham, Casper Barstow.
PLAINFIELD, Moosup, William A. Lewis.	Willimantie, Fred. Rogers, T. Morton Hills, O. B. Griggs, C. J. Fox.
Central Village, Chas. H. Rogers,*	—28
E. H. Davis.	
Wauregan, W. H. Judson.	

LITCHFIELD COUNTY.

W. S. MUNGER, M.D., of Watertown, President.

W J BEACH, M.D., of Litchfield, Vice-President.

J. J. NEWCOMB, M.D., of Litchfield, Clerk.

Censors—H. W. BUEL, M.D., J. W. BIDWELL, M.D., L. H. WOOD, M.D.*County Reporter*—L. H. WOOD, M.D., Wolcottville.

LITCHFIELD, H. W. BUEL,* H. E. Gates, W. J. Beach, WM. DEMING, J. J. Newcomb.	ROXBURY, Myron Downs.*
CANAAN, C. W. Camp.	SALISBURY, B. S. Thompson.
West Cornwall, Edward Sanford, I. R. Sanford.	Lakeville, W. Bissell.
MORRIS, Garry H. Miner,* C. H. Gilbert.	SILARON, William W. Knight.
Gaylordsville Charles F. Couch.	Wolcottville, T. S. Hanchett, L. H. Wood.
GOSHEN, J. H. North.	WARREN, John A. Derrickson.
HARWINTON, W. P. Swett.	WASHINGTON, Orlando Brown.
NEW HARTFORD, Jerry Burwell.	New Preston, Edward P. Lyman.*
NORFOLK, Wm. W. Welch,* J. H. Stevens.	WATERTOWN, W. S. Munger, H. P. Esterly.
Northfield, C. L. Blake.	WINCHESTER, West Winsted, James Welch,* John W. Bidwell, F. E. Barrows.
THOMASTON, Wm. Woodruff,* Ralph S. Godwin, A. G. Heaney.	WOODBURY, Harmon W. Shove.

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* Over sixty years of age.

MIDDLESEX COUNTY.

RUFUS BAKER, M.D., of Middletown, President.

WM. S. MILLER, M.D., of Clinton, Clerk.

Censors—S. W. TURNER, M.D., GEO. W. BURKE, M.D., E. B. NYE, M.D.

County Reporter—R. W. MATHEWSON, M.D., Durham.

MIDDLETOWN, Elisha B. Nye,* Geo. W. Burke, Rufus Baker,* F. D. Edgerton, Abraham M. Shew, Jos. W. Alsop, Jr., Daniel A. Cleaveland, John Morgan, Jas. B. Olmstead, Wm. E. Fisher. C. E. Stanley, P. V. Burnet, J. Frank Calef.	ESSEX, Alanson A. Hough,* Charles H. Hubbard.
CHATHAM, Middle Haddam, Albert B. Worthington.	HADDAM, Miner C. Hazen, Selden C. Noyes.
East Hampton, Albert Field.	Moodus, A. W. Bell.
CHESTER, Sylvester W. Turner.	OLD SAYBROOK, J. H. Granniss.
CROMWELL, IRA HUTCHINSON,* Winthrop B. Hallock, James Conland.	PORTLAND, C. A. Sears, Cornelius E. Hammond, S. P. Ladd.
DURHAM, R. W. Mathewson.*	SAYBROOK, Deep River, Edwin Bidwell.
	WESTBROOK, G. C. H. Gilbert, T. B. Bloomfield.
	CLINTON, W. S. Miller.
	KILLINGWORTH, J. Hamilton Lec.

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TOLLAND COUNTY.

S. G. RISLEY, M.D., of Rockville, President.

GILBERT H. PRESTON, M.D. of Tolland, Clerk.

Censors—G. H. PRESTON, M.D., WM. N. CLARK, M.D., A. R. GOODRICH, M.D.

County Reporter—S. G. RISLEY, M.D.

TOLLAND, G. H. Preston.*	Stafford Springs, C. B. Newton, F. L. Smith.
BOLTON, CHAS. F. SUMNER.*	VERNON, Vernon Depot, A. R. GOODRICH.*
COVENTRY, Maurice B. Bennett.	Rockville, Steph'n G. Risley,* Francis L. Dickinson, Frederick Gilnack, E. K. Leonard.
South Coventry, Henry S. Dean, E. P. Flint.	WILLINGTON, William L. Kelsey.
ELLINGTON, J. A. Warren.	
MANSFIELD DEPOT, F. E. Johnson.	
STAFFORD, Wm. N. Clark.*	
West Stafford, Joshua Blodgett.*	

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* Over sixty years of age.

ALPHABETICAL LIST

OF THE

MEMBERS OF THE CONNECTICUT MEDICAL SOCIETY,

With Date and Place of Graduation, and Post-office Address.

Names.	Place and Date of Graduation	P. O. Address.
Abernethy, Augustus H.,	Yale, 1864,	Bridgeport.
Adams, A. E.,	Coll. Phys. and Surg., N. Y.,	1880, Danbury.
Aimes, J. Martin,	Yale, 1857,	West Haven.
Allen, H. C.,	Univ. N. Y., 1879,	Broadbrook.
Allen, Francis F.,	Yale, 1825,	North Granby.
Allen, Hull,	Univ. N. Y., 1821,	Milford.
Allen, Almon S.,	Albany, N. Y., 1872,	Stratford.
Alling, W. G.,	Yale, 1870,	New Haven.
Almy, L. B.,	Bellevue, N. Y., 1876,	Norwich.
Alsop, J. W., Jr.,	Univ. N. Y., 1864,	Middletown.
Atwater, C. H.,	Coll. Phys. and Surg., 1871,	Wallingford.
Andrews, Wm. H.,	Bellevue, N. Y., 1873,	Milford.
Augur, Geo. J.,	Yale, 1879,	New Haven.
Avery, Geo. W.,	Yale, 1861,	Hartford.
Axtelle, J. F.,	L. I. Hosp. Coll., 1877,	Hartford.
Ayres, W. O.,	Yale, 1854,	New Haven.
Bacon, Francis,	Yale, 1853,	New Haven.
Bacon, Wm. T.,	Univ. N. Y., 1871,	Hartford.
Baker, Rufus,	Columbia Coll., D. C., 1844,	Middletown.
Baker, Scott R.,	Yale, 1879,	Ansonia.
Baldwin, E.,	Harvard, Mass., 1845,	Cantonbury.
Baldwin, James,	Yale, 1825,	Danbury.
Baldwin, N. C.,	Yale, 1837,	South Britain.
Banks, Nehemiah,	Yale, 1844,	Wallingford.
Barber, W. L.,	Bellevue, 1873,	Waterbury.
Barber, W. P.,	Dartmouth, N. H., 1870,	Lebanon.
Barber, A. E.,	Berkshire, Mass., 1854,	Bethel.
Barker, J. W.,	Yale, 1860,	Westville.
Barnes, Lewis,	Univ. Buffalo, N. Y., 1851,	Oxford.
Barnett, J. F.,	Yale, 1869,	West Haven.
Barolet, F. X.,	Victoria, Montreal, 1860,	Putnam.
Barrows, A. W.,	Yale, 1841,	Hartford.
Barrows, F. E.,	Univ. N. Y., 1876,	West Winsted.
Barstow, Caspar,	Burlington, Vt., 1878,	South Windham.
Bartlett, W. R.,	Yale, 1871,	New Haven.

Names.	Place and Date of Graduation.	P. O. Address.
Beach, W. J.,	Coll. Phys. and Surg., 1867,	Litchfield.
Beardsley, A.,	Berkshire, 1834,	Birmingham.
Beardsley, G. L.,	Bellevue, N. Y., 1873,	Birmingham.
Bell, A. W.,	Univ. N. Y., 1874,	Moolus.
Bell, Newton S.,	Burlington, Vt., 1864,	Windsor.
Bellosa, F.,	Yale, 1872,	New Haven.
Benedict, Geo. W.,	Coll. Phys. and Surg., 1879,	Norwalk.
Bennett, E. P.,	Berkshire, 1826,	Danbury.
Bennett, F. O.,	Berkshire, 1859,	Westford.
Bennett, M. B.,	Berkshire, 1863,	Covestry.
Bennett, W. C.,	Coll. Phys. and Surg., 1860,	Danbury.
Bidwell, Edwin,	Yale, 1847,	Deep River.
Bidwell, John W.,	Berkshire, 1846,	West Winsted.
Bill, Curtis H.,	Univ. N. Y., 1859,	Bridgeport.
Bishop, E. H.,	Yale, 1829,	New Haven.
Bishop, T. H.,	Yale, 1860,	New Haven.
Bissell, William,	Yale, 1856,	Lakeville.
Blake, C. L.,	Yale, 1875,	Essex.
Bloodgett, Joshua,	Berkshire, 1825.	West Stafford.
Bloomfield, T. B.,	Coll. Phys. and Surg., 1876,	Westbrook.
Bohannon, R. L.,	Univ. N. Y., 1874,	Darien.
Bouton, Geo. B.,	Yale, 1856.	Westford.
Bowen, W. C.,	Coll. Phys. and Surg., 1877,	Bridgeport.
Bradstreet, E. T.,	Coll. Phys. and Surg., 1877,	Meriden.
Bradley, W. L.,	Yale, 1864,	New Haven
Bragg, James D.,	Albany, 1867,	Bridgeport.
Braman, F. N.,	Bellevue, 1866,	New London.
Brandagee, E.,	Yale, 1838,	Berlin.
Brayton, Charles N.,	Coll. Phys. and Surg., 1873,	Stonington.
Bromley, Daniel F.,	Yale, 1867,	Hartford.
Bronson, Henry,	Yale, 1827,	New Haven.
Brown, Francis W.,	Univ. N. Y., 1877,	Woodbury.
Brownson, Wm. G.,	Coll. Phys. and Surg., 1863,	New Canaan.
Brush, F. V.,	Coll. Phys. and Surg., 1867,	Norwalk.
Brown, Orlando,	Yale, 1851,	Washington.
Buel, Henry W.,	Coll. Phys. and Surg., 1847,	Litchfield.
Buel, Virgil,	L. I. Coll. Hosp., 1871,	Harwinton.
Bugbee, L. F.,	Coll. Phys. and Surg., 1866,	Willimantic.
Bull, J. N.,	Coll. Phys. and Surg., 1878,	Plainville.
Bunce, H. C.,	Yale, 1850,	Glastonbury.
Bunnell, W. H.,	Coll. Phys. and Surg., 1879,	Bridgeport.
Burehard, Wm. C.,	Georgetown, D. C., 1866,	Montville.
Burke, Geo. W.,	Yale, 1843,	Middletown.
Burke, Wm. C., Jr.,	L. I. Coll. Hosp., 1875,	South Norwalk.
Burnap, S. R.,	Coll. Phys. and Surg., 1862,	Windsor Locks.
Burnett, P. V.,	Univ. N. Y., 1876,	Middletown.
Burritt, A. B.,	Yale, 1832,	Southbury.
Burwell, Jerry,	Berkshire, 1839,	New Hartford.
Butler, John S.,	Jefferson, Pa., 1828,	Hartford.
Calef, J. F.,	Yale, 1880,	Middletown.
Camp, C. W.,	Univ. N. Y., 1874,	Canaan.
Campbell, Jas., Jr.,	Univ. Vermont,	Hartford.
Carleton, Charles M.,	Harvard, 1861,	Norwich.

Names.	Place and Date of Graduation.	P. O. Address.
Carmalt, W. H.,	Coll. Phys. and Surg., 1861,	New Haven.
Carrington, Charles,	Coll. Phys. and Surg., 1848,	Farmington.
Carrington, Henry A.,	Harvard, 1848,	New Haven.
Cassidy, Patrick,	Univ. Vermont,	Norwich.
Castle, H. E.,	Yale, 1870,	Waterbury.
Chamberlain, C. W.,	Coll. Phys. and Surg., 1871,	Hartford.
Chamberlin, M. N.,	Yale, 1866,	Cheshire.
Chapman, A. F.,	Coll. Phys. and Surg., 1864,	Mystic.
Chapman, S. W.,	Coll. Phys. and Surg., 1869,	New Haven.
Child, E. M.,	Univ. N. Y., 1877,	Meriden.
Childs, Seth L.,	Woodstock, Vt., 1835,	East Hartford.
Churchill, Asa H.,	Yale, 1857,	Meriden.
Clarke, E. C.,	Univ. Vermont, 1868,	Norwalk.
Clark, F. P.,	Coll. Phys. and Surg., 1876,	Danbury.
Clark, Wm. N.,	Yale, 1830,	Stafford.
Classon, A. F.,	Univ. N. Y., 1875,	Danbury.
Clary, George,	Yale, 1857,	New Britain.
Cleaveland, D. A.,	Bowdoin, Me., 1856,	Middletown.
Coates, E. F.,	Yale, 1863,	Mystic Bridge.
Coates, Frank A.,	Coll. Phys. and Surg., 1873,	Mystic Bridge.
Coholan, M. J.,	Univ. N. Y., 1865,	New Britain.
Comings, B. N.,	Castleton, Vt., 1845,	New Britain.
Conland, James,	Univ. Vt., 1878,	Cromwell.
Coogan, Joseph A.,	Bellevue, N. Y., 1876,	Hartford.
Cotton, John,	Harvard,	East Woodstock.
Couch, Charles F.,	Berkshire, 1863,	Taylorsville.
Crary, David,	Castleton, 1834,	Hartford.
Crary, David, Jr.,	Yale, 1869,	Hartford.
Cremin, M. A.,	Coll. Phys. and Surg., 1874,	Hartford.
Cressy, Noah,	Berkshire, 1862,	Hartford.
Crossfield, F. S.,	Bellevue, 1878,	Hartford.
Crothers, T. D.,	Albany, 1875,	Hartford.
Cummings, Jas. R.,	Coll. Phys. and Surg., 1862,	Bridgeport.
Daggett, David S.	Yale, 1843,	New Haven.
Darling, A. E.,	Harvard, 1872,	Killingly.
Davis, C. H. S.,	Univ. N. Y., 1865,	Meriden.
Davis, E. H.,	Burlington, N. J., 1872,	Central Village.
Davis, G. P.,	Coll. Phys. and Surg., 1869,	Hartford.
DeForrest, Wm. B.,	Yale, 1840,	New Haven.
Dean, H. S.,	Jefferson, 1852,	South Coventry.
Deming, Ralph,	Yale, 1857,	Sharon.
Deming, William,	Yale, 1856,	Litchfield.
Derriekson, John R.,	Jefferson, 1850,	Warren.
Dibble, Frederick L.,	Yale, 1858,	New Haven.
Dickinson, F. S.,	Yale, 1840,	Rockville
Doherty, J. J. S.,	Univ. N. Y., 1874,	New Haven.
Doutteit, Henry,	Yale, 1879,	New Haven.
Downs, F. B.,	Coll. Phys. and Surg., 1878,	Bridgeport.
Downs, Myron,	Yale, 1838,	Roxbury.
Dubois, Henry A.,	Coll. Phys. and Surg., 1830,	New Haven.
Dunham, M. V. B.,	Harvard, 1867,	Greenfield Hill.
Dutton, Thomas A.,	Conn. Med. Soc., 1824,	Milford.
Dwyer, John,	Univ. N. Y., 1871,	Hartford.

Names.	Place and Date of Graduation.	P. O. Address.
Dwight, Edward,	Yale, 1876,	New Haven.
Dyer, Elijah,	Berkshire, 1828,	Norwich.
Edgerton, Francis D.,	Coll. Phys. and Surgs., 1864,	Middletown.
Eggleston, J. D.,	Coll. Phys. and Surgs., 1879,	Meriden.
Ellsworth, P. W.,	Coll. Phys. and Surgs., 1839,	Hartford.
Ensign, R. E.,	Albany, 1858,	Poquonnock.
Farnham, Geo. B.,	Yale, 1869,	New Haven.
Ferguson, Geo. D.,	Univ. N. Y., 1879,	Meriden.
Ferris, Anna J.,	Women's Med. Coll. Pa., 1874,	Meriden.
Field, Albert,	L. I. Coll. Hosp., 1867,	East Hampton.
Finch, Geo. T.,	Bellevue, N. Y., 1877,	Thompsonville.
Fisher, Wm. E.,	Univ. Pa., 1876,	Middletown.
Fiske, J. P.,	Univ. N. Y., 1875,	Southington.
Fiske, Marcus,	Univ. Pa., 1842,	Warehouse Point.
Fleischner, Henry,	Yale, 1878,	New Haven.
Flint, E. P.,	Yale, 1879,	South Coventry.
Foster, J. F. C.,	Yale, 1875.	New Haven.
Fox, Charles J.,	Univ. N. Y., 1876,	Willimantic.
Froelich, C. E.,	Copenhagen, 1870,	Hartford.
Frost, C. W. S.,	Coll. Phys. and Surgs., 1880,	Waterbury.
Fuller, Horace S.,	Coll. Phys. and Surgs., 1865,	Hartford.
Gardner, C.,	Jefferson, 1880,	Hampton.
Garlick, S. M.,	Harvard, 1877,	Fairfield.
Gates, H. E.,	L. I. Coll. Hos., 1861,	Litchfield.
Gaylord, C. W.,	Yale, 1872,	Branford.
Geib, H. P.,	Bellevue, 1869,	Stamford.
Gibbons, T. P.,	Jefferson, 1857,	New Haven.
Gilbert, C. H.,	Univ. N. Y., 1880,	Morris.
Gilbert, G. C. H.,	Yale, 1844,	Westbrook.
Gilbert, S. D.,	Yale, 1871,	Fair Haven.
Gilnaek, F.,	Coll. Phys. and Surgs., 1867,	Rockville.
Gladwin, Ellen F.,	Women's Med. Coll., N. Y. Infirmary, 1872,	Hartford.
Goodrich, A. R.,	Berkshire, 1846,	Vernon.
Goodwin, R. S.,	Coll. Phys. and Surgs., 1866,	Thomaston.
Goodyear, R. B.,	Yale, 1868,	North Haven.
Gorham, A. B.,	Yale, 1879,	Wilton.
Gorham, F.,	Yale, 1876,	Weston.
Graves, Thomas,	Harvard, 1870,	West Killingly.
Grannis, John H.,	Yale, 1868,	Old Saybrook.
Graves, Wm. B.,	Univ. N. Y., 1880,	New Haven.
Gray, Henry,	Dartmouth, 1847,	Bloomfield.
Gray, John,	Yale, 1863,	Mystic River.
Gregory, James G.,	Coll. Phys. and Surgs., 1868,	Norwalk.
Griffin, E. D.,	Coll. Phys. and Surgs., 1865,	Old Lyme.
Griggs, E. L.,	L. I. Coll. Hosp., 1864,	Waterbury.
Griggs, O. B.,	Univ. N. Y., 1847,	Willimantic.
Griswold, J. E.,	Univ. N. Y., 1878,	Glastonbury.
Griswold, R. M.,	Univ. N. Y., 1875,	North Manchester.
Griswold, R. W.,	Coll. Phys. and Surgs., 1854,	Rocky Hill.

Names.	Place and Date of Graduation.	P. O. Address.
Halleck, Winthrop B.,	L. I. Coll. Hosp., 1864,	Cromwell.
Hammond, C. E.,	Univ. N. Y.,	Portland.
Hanchett, T. S.,	Bellevue, N. Y., 1864,	Woleottville.
Harris, G. W.,	Coll. Phys. and Surgs., 1847,	Old Lyme.
Harrison, B. F.,	Yale, 1836,	Wallingford.
Hart, S. W.,	Yale, 1855,	New Britain.
Hastings, P. M.,	Coll. Phys. and Surgs., 1842,	Hartford.
Hawley, George B.,	Yale, 1836,	Hartford.
Hawley, G. F.,	Coll. Phys. and Surgs., 1867,	Hartford.
Hazen, M. C.,	Univ. Michigan, 1855,	Haddam.
Heady, E. B.,	Yale, 1872,	Milford.
Heaney, A. G.,	L. I. Med. Hosp. Coll., 1876,	Thomaston.
Hickok, O. S.,	Berkshire, 1854,	Ridgefield.
Higgins, R. L.,	Bellevue, 1867,	South Norwalk.
Hill, E. A.,	Harvard, 1850,	East Killingly,
Hills, T. M.,	Yale, 1863,	Willimantic.
Hill, Seth,	Yale, 1866,	Stepney.
Holmes, W. H.,	Harvard, 1879,	Waterbury.
Holbrook, Lowell,	Univ., N. Y., 1848,	Thompson.
Horton, W. W.,	Univ., N. Y., 1878,	Unionville.
Hotchkiss, W. H.,	Yale, 1872,	New Haven.
Hough, A. H.,	Yale, 1832.	Essex.
Hough, H. W.,	Yale, 1836,	Putnam.
Howard, Wm.,	Yale, 1875,	Avon.
Howe, H. G.,	Coll. Phys. and Surg., 1875,	Hartford.
Hubbard, C. H.	Yale, 1860,	Essex.
Hubbard, Robert,	Yale, 1851,	Bridgeport.
Hubbard, Stephen G.,	Dartmouth, 1843,	New Haven.
Hudson, Wm. M.,	Jefferson, 1855,	Hartford.
Hungerford, Henry,	Coll. Phys. and Surg., 1880,	Norwalk.
Hunt, E. K.,	Jefferson, 1828,	Hartford.
Huntington, E.,	Dartmouth, 1847,	Windham.
Huntington, S. H.,	Yale, 1876,	Wilton.
Hurlburt, G. A.,	Coll. Phys. and Surg., 1865,	Buckingham.
Hutchins, S.,	Harvard, 1841,	West Killingly.
Hutchinson, Ira,	Yale, 1825,	Cromwell.
Ives, Levi,	Yale, 1838,	New Haven.
Ives, Robert S.,	Coll. Phys. and Surg., 1866,	New Haven.
Jackson, James C.,	Jefferson, 1847,	Hartford.
Jarvis, Geo. C.,	Univ., N. Y., 1861.	Hartford.
Jennings, G. H.,	L. I. Coll. Hosp., 1875,	Griswold.
Jewett, P. A.,	Yale, 1839,	New Haven.
Jewett, T. B.,	Yale, 1879,	Birmingham.
Johnson, M. M.,	Univ. N. Y., 1877,	Hartford.
Johnson, S. C.,	Conn. Med. Soc., 1825,	Seymour.
Johnson, F. E.,	Univ. N. Y., 1879,	Mansfield Depot.
Judson, Walter	Coll. Phys. and Surg., 1870,	New Haven.
Judson, W. H.,	Jefferson, 1878,	Wauregan.
Kelsey, Wm. S.,	Jefferson, 1876,	Willington.
Kendall, Joshua C.,	Coll. Phys. and Surg., 1875,	Seymour.

Names.	Place and Date of Graduation.	P. O. Address.
Kent, J. B.,	Harvard, 1869,	Putnam.
Kinney, E. C.,	N. Y. Med. Coll., 1858,	Norwich.
Knight, W. W.,	Berkshire, 1856,	Sharon.
Knight, W. W.,	Univ. N. Y., 1876,	Hartford.
Lacey, Wm. F.,	Yale, 1844,	Danbury.
Ladd, S. P.,	Univ. N. Y., 1879,	Portland.
LaRue, Omer,	Victoria, Montreal, 1871,	Putnam.
Lander, Robert,	Yale, 1871,	Bridgeport.
Lec, J. H.,	Yale, 1858,	Killingworth.
Leighton, A. W.,	Yale, 1879,	New Haven.
Leavenworth, D. C.,	Yale, 1865,	New Haven.
Leonard, A. S.,	Coll. Phys. and Surg., 1866,	Woodstock Valley.
Leonard, E. K.,	Conn. Med. Soc., 1866,	Roekville.
Lewis, B. S.,	Harvard, 1875,	New Haven.
Lewis, G. F.,	Yale, 1856,	Bridgeport.
Lewis, G. F.,	Yale, 1864,	Collinsville.
Lewis, John B.,	Univ. N. Y., 1853,	Hartford.
Lewis, Wm. A.,	Harvard, 1851,	Moosup.
Lindsley, C. A.,	Yale, 1852,	New Haven.
Lindsley, C. P.,	Yale, 1878,	New Haven.
Lines, J. F.,	Yale, 1862,	New Haven.
Lockwood, W. A.,	Coll. Phys. and Surg., 1864,	Norwalk.
Lynan, E. P.,	Yale, 1842,	New Preston.
Lyon, E. B.,	Berkshire, 1862,	New Britain.
Lyon, Irving W.,	Coll. Phys. and Surg., 1863,	Hartford.
Lyons, A. W.,	Columbus, 1876,	Monroe.
Mailhouse, Max,	Yale, 1878,	New Haven.
Mann, M. D.,	Coll. Phys. and Surg, 1871,	Hartford.
Manning, Mason,	Yale, 1818,	Mystic.
Manwaring, R. A.,	Yale, 1833,	New London.
Martin, T. F.,	Univ. N. Y.,	Bridgeport.
Mason, J. K.,	Harvard, 1861,	Suffield.
Mason, W. H.,	Buffalo, 1865,	Norwich.
Mather, Wm. H.,	Univ. N. Y.,	Suffield.
Mathewson, R. W.,	Coll. Phys. and Surg., 1835,	Durham.
May, A. E.,	Univ. Vt., 1879,	Naugatuck.
Mayer, Nathan,	Cincinnati, 1857,	Hartford.
McGaughey, J. D.,	Jefferson, 1870,	Wallingford.
McIntosh, L. W.,	Berkshire,	East Hartford.
McKnight, E. J.,	Coll. Phys. and Surg., 1879,	East Hartford.
McDonald, E. W.,	Univ. N. Y., 1871,	Waterbury.
Mead, E. H.,	Univ. Mich., 1878,	Berlin.
Miller, W. S.,	Yale, 1879,	Clinton.
Mincer, G. H.,	Yale, 1824,	Morris.
Morgan, John,	Yale, 1869,	Middletown.
Morgan, Wm. D.,	Coll. Phys. and Surg., 1877,	Hartford.
Morgan, W. S.,	Yale, 1855,	Watertown.
Morse, E. T.,	Burlington, 1877,	Thompson.
Munger, Elisha,	Yale, 1875,	East Lyme.
Munger, W. S.,	Yale, 1855,	Watertown.
Munson, B. W.,	Yale, 1869,	Bridgeport.

Names.	Place and Date of Graduation.	P. O. Address.
Nash, David H.,	Yale, 1835,	Bridgeport.
Nelson, J. D.,	Coll. Phys. and Surg., 1875,	North Stonington.
Nelson, A. W.,	Harvard, 1861,	New London.
Newcomb, J. J.,	Yale, 1875,	Litchfield.
Newton, C. B.,	Yale, 1851,	Stafford Springs.
Newton, S. B.,	Berkshire, 1854,	East Hartford.
Neville, J. J. M.,	Coll. Phys. and Surg., 1876,	Waterbury.
Niekerson, N.,	N. Y. Med. Coll., 1857,	Meriden.
Nicoll, John,	Yale, 1854,	New Haven.
Nolan, Robert,	Univ. Vt., 1877,	Norwalk.
Nooney, E. D.,	Coll. Phys. and Surg., 1871,	Stratford.
North, Alfred,	Coll. Phys. and Surg., 1861,	Waterbury.
North, J. H.,	L. I. Coll. Hosp., 1873,	Goshen.
Noyes, S. W.,	Univ. Pa., 1868,	Haddam.
Nye, Elisha B.,	Yale, 1838,	Middletown.
Oakes, H. A.,	Coll. Phys. and Surg., 1878,	New Haven.
O'Connor, M. C.,	Coll. Phys. and Surg., 1873,	New Haven.
O'Flaherty, John,	Albany, 1864,	Hartford.
Olmstead, James B.,	Yale, 1874,	Middletown.
Osborne, C. H.,	Yale, 1876,	Southport.
O'Sullivan, T. J.,	Univ. N. Y., 1874,	Birmingham.
Packard, Geo. B.,	Univ. Vt., 1874,	Hartford.
Paddock, Lewis S.,	Univ. N. Y., 1854,	Norwich.
Page, C. W.,	Harvard, 1870,	Hartford.
Parker, J. N.,	Yale, 1867,	South Manchester.
Parnele, Geo. W.,	L. I. Coll. Hosp., 1869,	Hartford.
Parsons, E. F.,	Coll. Phys. and Surg., 1858,	Thompsonville.
Peck, A.,	Univ. N. Y., 1875,	Norwich.
Perkins, W. S. C.,	Coll. Phys. and Surg., 1860,	Norwich.
Phelps, J. W.,	Castleton, Vt., 1846,	Woleottville.
Phinney, E.,	Yale, 1835,	Norwich.
Pierpont, Henry,	Yale, 1854,	New Haven.
Pinney, Chas. H.,	Coll. Phys. and Surg., 1853,	Derby.
Platt, G. L.,	Yale, 1838,	Waterbury.
Porter, George L.,	Jefferson, 1862,	Bridgeport.
Porter, Isaac G.,	Univ. Pa., 1833,	New London.
Powers, F.,	Coll. Phys. and Surg., 1870,	Westport.
Preston, G. H.,	Castleton, Vt., 1844,	Tolland.
Reid, Thomas,	Univ. N. Y., 1876,	Trumbull.
Reynolds, G. P.,	Univ. N. Y., 1852,	Guilford.
Rising, Mary J.,	Univ. Mich., 1876,	Bridgeport.
Rice, F. A.,	Bellevue, 1874,	Bridgeport.
Rising, H. M.,	Yale, 1868,	So. Glastonbury.
Risley, S. G.,	Univ. N. Y., 1846,	Rockville.
Roberts, G. R.,	Coll. Phys. and Surg., 1878,	Collinsville.
Robinson, R.,	L. I. Coll. Hosp., 1869,	Danielsonville.
Rockwell, S. W.,	Yale, 1855,	E. Windsor Hill.
Rogers, Charles H.,	Yale, 1847,	Central Village.
Rogers, Fred,	Univ. N. Y., 1863,	Willimantic.
Ruickholdt, A.,		New Haven.
Russell, Gurdon W.,	Yale, 1837,	Hartford.

Names.	Place and Date of Graduation.	P. O. Address.
Russell, Wm. S.,	Yale, 1880,	New Haven.
Russell, T. H.,	Yale, 1875,	New Haven.
Sanford, Edward,	N. Y. Med. Coll., 1859,	West Cornwall.
Sanford, George W.,	Berkshire, 1836,	Tariffville.
Sanford, I. R.,	Yale, 1875,	West Cornwall.
Sanford, Leonard J.,	Jefferson, 1854,	New Haven.
Scars, C. A.,	Univ. N. Y., 1862,	Portland.
Sheffrey, C. W.,	Yale, 1874,	Bridgeport.
Shelton, Gould A.,	Yale, 1869,	Huntington.
Shephard, Geo. R.,	Yale, 1866,	Hartford.
Shew, A. M.,	Jefferson, 1864,	Middletown.
Shove, H. W.,	Yale, 1853,	Woodbury.
Simmons, J. H.,	Univ. N. Y., 1863,	Ashford.
Smith, A. J. F.,	Coll. Phys. and Surg., 1863,	Bridgeport.
Smith, H. B.,	Yale, 1876,	New Haven.
Smith, I. S.,	Yale, 1867,	New Haven.
Smith, F. S.,	Univ. N. Y., 1875,	Stafford Springs.
Sprague, S. L.,	Harvard, 1850,	Norwich.
Stanley, C. E.,	Univ. Pa., 1876,	Middletown.
Stanton, Geo. D.,	Bellevue, 1865,	Stonington.
Stanton, J. G.,	Bavaria, 1873,	New London.
Steadman, G. W.,	Bellevue, N. Y., 1875,	Southington.
Stearns, Henry P.,	Yale, 1855,	Hartford.
Stevens, J. A.,	Univ. N. Y., 1872,	Hartford.
Stevens, J. H.,	Coll. Phys. and Surg., 1852,	Norfolk.
St. John, S. B.,	Coll. Phys. and Surg., 1870,	Hartford.
Stoddard, Thomas,	Yale, 1836,	Seymour.
Stone, Geo. S.,	Coll. Phys. and Surg., 1865,	New Britain.
Storrs, M.,	Yale, 1853,	Hartford.
Strickland, R. S.,	Albany, 1839,	Enfield.
Sumner, C. F.,	Yale, 1854,	Bolton.
Surridge, Charles G.,	Yale, 1879,	New Haven.
Sweet, W. P.,	Univ. Vermont, 1876,	Harwinton.
Swasey, E. P.,	Coll. Phys. and Surg., 1869.	
Swift, Edwin E.,	Univ. N. Y., 1880,	Hamden.
Swift, E. D.,	Univ. N. Y., 1849,	Hamden.
Talbot, R. B.,	Coll. Phys. and Surg., 1877,	Hartford.
Talcott, Alvan,	Yale, 1831,	Guilford.
Teeple, G. M.,	Albany, 1849,	Bridgeport.
Thacher, James K.,	Yale, 1879,	New Haven.
Thomson, B. S.,	Bellevue, N. Y., 1867,	Salisbury.
Thomson, C. S.,	Yale, 1822,	Fair Haven.
Thomson, W. H.	Yale, 1862,	Fair Haven.
Thomson, E. L.,	Yale, 1874,	New Haven.
Tiffany, R. H.,	Castleton, Vt., 1837,	Hartford.
Tinker, W. R.,	Univ. N. Y., 1880,	East Hartford.
Todd, Wm. S.,	Coll. Phys. and Surg., 1869,	Ridgefield.
Townsend, T. B.,	Yale, 1858,	New Haven.
Tracy, A. W.,	McGill Univ., Canada, 1873,	Meriden.
Treadwell, O. F.,	Yale, 1865,	Hamden.
Tremaine, W. H.,	Berkshire, 1838,	Hartford.
Trowbridge, W. H.,	Yale, 1855,	North Stamford.

Names.	Place and Date of Graduation.	P. O. Address.
Turner, Sylvester,	Yale, 1842,	Chester.
Tyler, David A.,	Yale, 1844,	New Haven.
Wakeman, M. H.,	Yale, 1854,	Redding.
Wakeman, W. J.,	Yale, 1879,	Bridgeport.
Ward, E. T.,	Coll. Phys. and Surg., 1871,	Bridgeport.
Wainwright, W. A. M.,	Coll. Phys. and Surg., 1867,	Hartford.
Warner, Eli,	Coll. Phys. and Surg., 1867,	Hartford.
Warner, A. S.,	Dartmouth, 1847,	Wethersfield.
Warren, J. A.,	Coll. Phys. and Surg., 1860,	Ellington.
Way, Henry E.,		Bristol.
Weaver, C. H.,	Coll. Phys. and Surg., Md., 1879,	Manchester.
Webb, D. M.,	Yale, 1849,	Madison.
Welch, Geo. K.,	Coll. Phys. and Surg., 1878,	New Britain.
Welch, James,	Berkshire, 1831,	West Winsted.
Welch, William W.,	Yale, 1839,	Norfolk.
Wheeler, Frank,	Coll. Phys. and Surg., 1852,	Farmington.
White, F. O.,	Yale, 1873,	New Haven.
White, Moses C.,	Yale, 1854,	New Haven.
White, R. A.,	Yale, 1832,	Weatogue.
Whiton, F. H.,	Dartmouth, 1871,	North Manchester.
Whittemore, F. H.,	Bellevue, N. Y., 1874,	New Haven.
Whittemore, F. J.,	Univ. N. Y., 1851,	New Haven.
Wilcox, L. S.,	Coll. Phys. and Surg., 1855,	Hartford.
Wildman, W. G.,	Coll. Phys. and Surg., 1880,	Danbury.
Wile, William C.,	Univ. N. Y., 1870,	Sandy Hook.
Williams, A. S.,	Jefferson, 1840,	Brookfield.
Wilson, F. M.,	Harvard, 1875,	Bridgeport.
Wilson, S. A.,	Yale, 1852,	Windsor.
Winchell, A. E.,	Coll. Phys. and Surg., 1865,	New Haven.
Witter, John,	Yale, 1857,	Putnam.
Witter, William,	Yale, 1865,	Granville.
Wolcott, Willard,	Harvard, 1879,	Waterbury.
Wood, Luther H.,	Yale, 1869,	Wolcottville.
Wood, William,	Univ. N. Y., 1847,	East Windsor Hill.
Woodruff, William,	Yale, 1826,	Thomaston.
Woodward, Ashbel,	Bowdoin, 1829,	Franklin.
Wordin, N. E.,	Jefferson, 1873,	Bridgeport.
Worthington, A. B.,	Yale, 1842,	Middle Haddam.
Wright, F. W.,	Bellevue, 1880,	Hamden.
Wright, T. G.,	Univ. N. Y., 1865,	Plainville.
Wright, J. W.,	Univ. N. Y., 1880,	Bridgeport.
Young, Francis J.,	Yale, 1866,	Bridgeport.
Zink, Walter,	Wurtzburg,	North Branford.

Members noticing any errors or omissions in their record will please inform the Secretary for correction in future lists.

REPORT

OF THE COMMITTEE TO NOMINATE PROFESSORS AT THE MEDICAL DEPARTMENT OF YALE COLLEGE.

The Committee to Nominate Professors to the Medical Department of Yale College report that at a meeting held at New Haven, there were present on the part of the Society, C. H. Pinney, M.D., of Derby, Isaac G. Porter, M.D., of New London, R. S. Goodwin, M.D., of Thomaston. With the advice and approval of the President and Faculty of Yale College, the following gentlemen were elected Professors in the Medical Department of Yale College :
F. M. PRUDDEN, M.D., F. E. BECKWITH, M.D.

Attest,

R. S. GOODWIN, M.D.,

Clerk.

REPORT OF THE EXAMINING BOARD.

By H. S. FULLER, M.D., CLERK.

Pursuant to notice given by the Dean of the Faculty, the Examining Board met at the Medical College, New Haven, June 29, 1880.

President G. L. Platt, M.D., called the meeting to order, and Dr. H. S. Fuller was elected reporter to the Connecticut Medical Society.

Prof. Lindsley's report of the last meeting was read and accepted.

Written papers by each candidate were laid before the Board, and were examined. Each candidate was then called before the Board, and was questioned by members appointed by the Society.

The following gentlemen were recommended for the degree of M.D.:

George Ensign Bushnell, A.B.
Andrew Fay Currier, A.B.
Henry Holbrook Curtis, Ph.B.
Loren True Day.
Charles Hubbard Howland.
Edwin Kilbourn Roberts.
William Spencer Russell.
Samuel Wendell Williston.

Voted to excuse Mr. Currier from appearing before the Board on account of sailing for Europe.

The following gentlemen were examined on partial course:

William Whitney Hawkes, A.B.
Henry William Allan.
George Marland Bush.
Charles Warren Dana.

Mr. Hawkes passed a satisfactory examination in Chemistry, Anatomy, Physiology, and Materia Medica. Mr. Allan was conditioned on Physiology. The others were recommended to continue their studies to another examination.

With one exception the examination of the candidates for the degree was very satisfactory, and evinced thorough instruction and good work on the part of the student.

By examining the papers of the students, it appears that too many are admitted to the study of medicine who are entirely lacking in a thorough English education. We are glad to learn that hereafter this will be avoided, the Faculty having decided to admit no students without a preliminary examination. This is a step in the right direction, and will raise the standard of the Medical Department very much, and will oblige members of the Society to insist more upon a thorough education before commencing the study of medicine.

By a recent rule of the Faculty theses are no longer required. The Keese prizes, however, are now available for the two best voluntary theses from members of the graduating class.

PROCEEDINGS

OF THE

Connecticut Medical Society,

1882.

NINETY-FIRST ANNUAL CONVENTION,

HELD AT

New Haven, May 24th and 25th.

NEW SERIES. VOL. II.—NO. 3.

PUBLISHED BY THE SOCIETY.

C. W. CHAMBERLAIN, M.D., Secretary.

HARTFORD, CONN.

HARTFORD, CONN.:

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1882.

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The Connecticut Medical Society does not hold itself responsible for the opinions contained in any article, unless such opinions are endorsed by a special vote.

Next Annual Convention of the Connecticut Medical Society will be held in Hartford, the 4th Wednesday in May, and continue in session during the Thursday following.

OFFICERS OF THE SOCIETY.

1882-1883.

PRESIDENT.

WM. G. BROWNSON, M.D., New Canaan.

VICE-PRESIDENT.

E. B. NYE, M.D., Middletown.

VICE-PRESIDENTS, *ex officio*.

WILLIAM M. HUDSON, M.D.

N. NICKERSON, M.D.

E. C. KINNEY, M.D.

WM. C. WILE, M.D.

JOHN WITTER, M.D.

W. S. MUNGER, M.D.

MINER C. HAZEN, M.D.

C. B. NEWTON, M.D.

TREASURER.

E. P. SWASEY, M.D.

SECRETARY.

C. W. CHAMBERLAIN, M.D.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

W. A. M. WAINWRIGHT, M.D. H. S. FULLER, M.D.

GEO. F. LEWIS, M.D.

STANDING COMMITTEES.

On Examination.

WM. G. BROWNSON, M.D., *ex officio.*
D. A. CLEVELAND, M.D.
C. E. HAMMOND, M.D.
H. S. FULLER, M.D.
ORLANDO BROWN, M.D.
P. A. JEWETT, M.D.
J. H. GRANNISS, M.D.
C. B. NEWTON, M.D.

Committee to Nominate Professors in the Medical Department of Yale College.

R. S. GOODWIN, M.D. M. B. BENNETT, M.D.
ISAAC G. PORTER, M.D. W. J. BEACH, M.D.
ORLANDO BROWN, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

G. S. PLATT, M.D. S. G. RISLEY, M.D.
C. H. BILL, M.D. A. WOODWARD, M.D.
LOWELL HOLBROOK, M.D.

Committee of Publication.

C. W. CHAMBERLAIN, M.D. }
E. P. SWASEY, M.D. } *ex officio.*
IRVING W. LYON, M.D.

Committee of Arrangements.

W. A. M. WAINWRIGHT, M.D.,
Anniversary Chairman.
G. P. DAVIS, M.D.
JAMES CAMPBELL, M.D.

Dissertator.

H. E. GATES, M.D.

Alternate.

P. CASSIDY, M.D.

PROCEEDINGS.

CONNECTICUT MEDICAL SOCIETY--NINETY-FIRST ANNUAL CONVENTION.

The President and Fellows of the Connecticut Medical Society met in the Common Council Chamber, City Hall, New Haven, at 3 o'clock P. M., Wednesday, May 24, 1882.

The President, William Deming, M.D., after calling the convention to order appointed Dr. R. S. Goodwin of Thomaston and the Secretary, as the Committee on Credentials. This committee reported that the Fairfield County Society had elected five Fellows and five alternates, and that two of the latter had been accepted to fill vacancies. They also recommended that hereafter power to elect alternates be given by law to the county societies. A request had been made by the president of one of the county societies that he be allowed to fill vacancies in his county delegation, stating that he had been authorized so to do by his county society, although there were no objections to this course in the present instance, yet the committee judged that abuses could easily grow out of this method if allowed, so they reported against such a method of filling vacancies. The report of the committee was accepted, the amendment proposed referred to next year, as the rule directs, and the adverse report upon the second method adopted. The following is the list accepted:

LIST OF FELLOWS, *ex officio*.

President.

WM. DEMING, M.D.

Vice-President.

WM. G. BROWNSON, M.D.

Vice-Presidents, ex officio.

WILLIAM M. HUDSON, M.D.
 N. NICKERSON, M.D.*
 E. C. KINNEY, M.D.
 WM. C. WILE, M.D.
 JOHN WITTER, M.D.*
 W. S. MUNGER, M.D.
 MINER C. HAZEN, M.D.
 C. B. NEWTON, M.D.*

Treasurer.

F. D. EDGERTON, M.D.

Secretary.

C. W. CHAMBERLAIN, M.D.

Committee on Matters of Professional Interest in the State.

W. A. M. WAINWRIGHT, M.D.
 L. S. WILCOX, M.D.†
 GEO. F. LEWIS, M.D.*

FELLOWS ELECTED IN 1881.

Hartford County.

Eli Warner, M.D.	George W. Avery, M.D.
G. W. Steadman, M.D.	W. T. Bacon, M.D.
George F. Lewis, M.D.	

New Haven County.

W. H. Carmalt, M.D.	H. Davis, M.D.
A. E. Winchell, M.D.	C. A. Lindsley, M.D.
S. D. Gilbert, M.D.	

New London County.

E. D. Griffin, M.D.*	J. G. Stanton, M.D.*
P. Cassidy, M.D.	F. N. Braman, M.D.
A. Woodward, M.D.*	

* Absent.

† Deceased.

Fairfield County.

G. L. Porter, M.D.
J. C. Kendall, M.D.

W. C. Bowers, M.D.
Geo. B. Bonton, M.D.

C. H. Bill, M.D.

Windham County.

R. Robinson, M.D.
A. E. Darling, M.D.*

A. S. Leonard, M.D.
O. B. Griggs, M.D.*

F. G. Sawtelle, M.D.*

Litchfield County.

L. H. Wood, M.D.
B. S. Thompson, M.D.

J. W. Bidwell, M.D.*
Orlando Brown, M.D.

R. S. Goodwin, M.D.

Middlesex County.

J. H. Granniss, M.D.
A. Worthington, M.D.

E. B. Nye, M.D.
C. E. Hammond, M.D.

J. Olmstead, M.D.

Tolland County.

E. K. Leonard, M.D.*

Wm. L. Kelsey, M.D.

Maurice B. Bennett, M.D.*

The President then addressed the Convention as follows:

Gentlemen and Fellows of the Connecticut Medical Society:

It affords me the highest pleasure to welcome you to this our anniversary, and to invite your advice and assistance in the business before us. The remarks which I made to you with regard to the prosperity of our society a year ago are as true now as they were then. Our numbers have increased, although our losses by death have been above the average number. Most prominent, perhaps, among such losses are the names of Dr. Ira Hutchinson, an ex-president of this society, Dr. Lucien S. Wilcox, and Dr. Lewis Williams. Obituary notices of these and others of our deceased brethren will come to you from the proper sources. Such names should not be forgotten.

*Absent.

It must be apparent to all present, whose memories extend back to the time when the Connecticut Medical Society was reorganized and—so to speak—reconstructed, that the power and influence of the society over the public, the feeling of a greater common interest among our members, the desire to live up to the principles expressed in our national code of ethics, the interest taken in our meetings, more particularly in the meetings of our county societies, and generally in all those things which tend to make our society respectable and respected both by the public and by our own membership have greatly improved. We can well remember the time when our society at its annual meetings was represented by a mere handful of the Fellows, who came together for the election of officers, to hear an address by the President, which was frequently no more than a mere literary exercise, an essay or two, and then departed to their homes, and in due time received from the Secretary a printed report, which, with the exception of the address and essays, was but little more than a list of membership. Now we have full attendance of the Fellows, careful selection of officers and essayists, large attendance at our mass meetings, papers read which are, and are worthy to be classed among the best of current medical literature, and the reports of the transactions of our annual meetings we justly rank among the most valuable books upon the shelves of our libraries.

Among the causes of this advancement beyond those which naturally grow out of the advantages of the better organization of the society, may be mentioned the better education, the higher social, moral, and professional character and qualifications of our membership, and the fuller recognition of our duties to each other and to the public. In the coming twenty years can we make the same progress and improvement that the past score of years has shown? I fully believe that we can, and even very much more, and to indicate what in my own belief will do most to accomplish this most desirable result will be the object of the few remarks which I shall to-day address to you.

I believe that the time has come when the regular medical profession, as represented by this society, can and should assume a more aggressive attitude, and demand from the community and even from the State those rights and privileges which clearly belong to us as the regular profession. That we are the regular profession no man, or body of men, can deny, and that we should

be recognized as such is equally indisputable. We have the learning, the books, the experience, and, more especially, those traditions of our science which no irregular practitioner can by any possibility ever obtain. We have moreover that grand element which must necessarily exist among all truly scientific bodies, coöperation. Our society is not a secret society, but the results of our own observation and experience are freely communicated to each other, and to each other only, because we believe that we who are educated to a learned, difficult, and, to some extent, an occult science, are the only proper custodians of such a science. This fact is recognized by every European government. Upon the continent of Europe no man (or woman) can practice, without incurring severe penalties, any form of medicine or surgery unless a graduate of some regular school of medicine. Why should not we in America receive the same protection from the national or at least the State governments which our brethren abroad receive? It would be no less a protection to the community than to our selves. It has been said that in this free country there is a little too much liberty. Certainly a liberty which allows a public to stultify itself, or designing and unprincipled persons easily to stultify it, is, to say the the least, excessive. I recommend to you, gentlemen, the appointment of a committee to take this subject into consideration, and even to demand, if desired best, from the legislature of the State that protection which clearly and of right belongs to us.

I have mentioned the principles expressed in our code of ethics; the *principles*, not the code itself. These principles are only those which exist, or should exist, among all gentlemen, and especially among gentlemen composing a scientific and learned society such as ours. Among such gentlemen these principles should and would exist to at least as great an extent as now, even if there were no code at all. And if there are any in our society who would violate those principles (and I hope there are none such), such persons would do so whether there were any code or not. The advantages of a code are, to say the least, doubtful. He whose gentlemanly and professional instincts do not lead him to live up to our principles, is unworthy to be a member of a profession which represents so much of all that which is noble, honorable, honest, and charitable, and, in short, so much that is best expressed by the grand old Anglo-Saxon word, good. Penal and

disciplinary statutes are made for the bad, not for the good, and while I am by no means to be understood as countenancing professional intercourse with irregular practitioners, or even with those regular practitioners who hold such irregular intercourse, I am clearly of the belief that our society and the profession generally would be better off without the code than with it. It is not conducive to one's self respect to have it implied—as the existence of a code does imply—that we are restrained from irregular practices by the dread of penalties rather than by honor alone. I recommend this matter to your serious consideration. The code, if not entirely done away with, should, in my opinion, at least be greatly modified.

Much can be done to promote our interests by the county societies. Too often the general opinion of the community in the small towns where most of our county societies hold their meetings is that such meetings are semi-secret, and that their principal business is to establish an increase of fees for professional services, etc. Of these and of other errors the public mind should be disabused, and this can best be done by throwing open, to a certain extent, our doors to the public. At all meetings of the county societies let a few of the prominent and intelligent citizens of the town, clergymen, lawyers, or business men be invited to be present. I have seen this plan practiced in a neighboring State, and in the county society of which I have until lately been a member, with gratifying results. I remember an eminent manufacturer thus present one day expressing his surprise and gratification at the high character and usefulness of the society, and adding this remark: "If I should employ a doctor, and afterwards find out that he was not a member of a medical society, I would dismiss him." Care should also be taken by the clerks of local societies to see that the proceedings of meetings are correctly given to the community through that great engine of publicity—the press. We have nothing to lose by making our proceedings public, and on the contrary may have much to gain.

More than all, perhaps, can be done in the way of promoting the interests of our profession, by a proper and judicious exercise of that influence which every intelligent practicing physician has over his own constituency. It is to be regretted, perhaps, that so large a part of the education of our youth is intrusted to the care of another of the so-called learned professions, and so little of it to

our own. Nevertheless we can, if we will, in the peaceful walks of our professional lives, in our offices, in our few leisure hours, or while waiting in the families or at the bedsides of our patients, as opportunity occurs, say a word or two, which will do much to disabuse the public mind of many gross errors regarding our profession, and teach, in a quiet, inobtrusive manner, many of the great facts of our science, such as the self-limitation of certain diseases, the medical powers of nature, the fallacy of certain so-called "systems" of practice, etc. By thus exercising our individual influence we can do much towards advancing the influence and interests of our society and of the profession generally.

I have thus briefly indicated to you, gentlemen, my belief as to what can be done to advance the power and influence of our society. It would be easy to say much more, but I have mentioned what I believe to be the principal points, and I have stated them as briefly and as plainly as I can, because I believe that strong facts do not need strong language, and that among an intelligent body of men like you there can be no eloquence so effective as a plain thing said in the plainest possible manner. If any of my suggestions meet with your approval, I shall be much gratified if you will take such measures as will carry them into effect, for I heartily believe that if the principles which I have endeavored to indicate can be put into practice, charlatanism, empiricism, and quackery can be utterly extinguished, and with them their great parent—ignorance.

The following Committees were appointed by the President :

On Unfinished Business.

Wm. Hudson, M.D. W. H. Carmalt, M.D.
B. S. Thompson, M.D.

On County Resolves.

W. A. M. Wainwright, M.D. R. S. Goodwin, M.D.
E. C. Kinney, M.D.

On Business.

C. E. Hammond, M.D. C. W. Chamberlain, M.D., *Ex officio.*

On Honorary Members and Degrees.

L. H. Wood, M.D. J. H. Grannis, M.D.
G. W. Avery, M.D.

Auditing Committee.

C. H. Bill, M.D. Geo. B. Bouton, M.D.

To Nominate Essayists.

G. L. Porter, M.D. H. Davis, M.D.

A recess was then taken for the election of the Nominating Committee by the Fellows from each county. The following names were reported :

E. Warner, M.D., Hartford County.
C. A. Lindsley, M.D., New Haven County.
Patrick Cassidy, M.D., New London County.
C. H. Bill, M.D., Fairfield County.
Reinzi Robinson, M.D., Windham County.
Orlando Brown, M.D., Litchfield County.
J. H. Grannis, M.D., Middlesex County.
W. L. Kelsey, M.D., Tolland County.

On motion of Dr. Lewis of Collinsville, seconded by Dr. Chamberlain, it was voted: "That the society appoint a committee of three on that part of the president's address relating to the code of ethics." The following were elected:

E. C. Kinney, M.D.
C. A. Lindsley, M.D.
G. W. Avery, M.D.

Dr. Deming was nominated but declined absolutely to serve, as his engagements would not permit him to give the time to the subject which it would require.

The Secretary then read a communication from Dr. Griggs of Willimantic, advocating very nearly the same measures in regard to qualifications for practice, as had been advanced by the president, but more radical, requiring an examination by a state board. On motion the whole subject was referred to the committee on business, who recommended that the paper be laid upon the table. With

regard to the plan recommended by the president, it was not, in their judgment, expedient to urge the matter at present upon the legislature. The people regard it as designed solely for our own protection, and until public sentiment is farther developed, and especially until the standards of medical education have been uniformly advanced and abuses reformed in our own ranks, it were better not to ask for protective measures. The ease with which the profession is entered by those with small cultivation of their natural powers, and little training for their special work, is a reproach that must first be wiped out. Moreover, one important point, the exclusion of itinerants, has been gained; it is wiser to allow that to become firmly established before risking further advance. The report was accepted.

The report of the treasurer was received and referred to the auditing committee, which having examined the accounts and compared them with the accompanying vouchers, declared the report to be correct, and it was received in accordance with their report and the committee discharged. The following is a summary:

Balance on hand from old account, May, 1881,	-	\$382.24
Cash received during fiscal year,	-	562.90
		<hr/>
Total,	-	\$945.14
Expenditures for fiscal year,	-	\$498.17
Balance on hand May, 1882,	-	446.97
Increase of expenses over 1880,	-	77.57
Increased receipts over 1880,	-	41.96
Excess of receipts over expenses,	-	64.73
Excess over balance of last year,	-	68.73

Amount due on tax of 1881.

Hartford County,	-	-	-	Nothing.
New Haven County,	-	-	-	\$66.90
New London	"	-	-	Nothing.
Fairfield	"	-	-	"
Windham	"	-	-	"
Litchfield	"	-	-	"
Middlesex	"	-	-	"
Tolland	"	-	-	"

As is seen by the report, the New Haven County Association is the only one in arrears, there is about as much due from that county on the tax of 1880. With this exception all the county societies show a clean record with no arrearages. The improvement in New Haven county has been so marked that it is probable that soon the books will show an entirely clean record. While before arrearages of several years were not uncommon, now there are but few of more than two years. This improvement is due largely to the county clerks, whose zeal and efficiency are deserving of great praise. It is recommended to the county societies that they make as few changes as possible, and retain efficient clerks as long as they will serve. The society is to be congratulated upon the improved financial relations of its members towards it, and it is to be hoped that the prompt honesty in the payment of the annual dues, that now characterizes the great majority of members, may never undergo any change or decrease. To render this complete is the only unsolved problem that is left. This must be undertaken by other hands than mine, as my business forces me to resign the office so kindly entrusted to my hands. It was my ambition to leave a working balance in the treasury, and this I have practically accomplished, as the receipts last year were more than the expenses. The expenses were, however, considerably decreased as no bill was rendered from Hartford for incidental expenses of the convention held there, in any shape or manner.

On motion of Dr. Chamberlain the thanks of the convention were unanimously voted to Dr. Edgerton for his faithful and successful services as treasurer of this society, that we regret the necessity that compels him to resign the office he has so well filled.

On motion of Dr. White, the Secretary was authorized to receive the report of the Committee on Examination after the adjournment of the convention.

The Committee on Honorary Members and Honorary Degrees reported that no candidates for honorary degrees had been presented. They recommended Dr. Pliny Earle of Northampton, Mass., for election as an honorary member, and referred the following to the next convention in accordance with the rule that requires names to be presented one year and acted upon the next: Dr. J. S. Billings, Assistant Surgeon-General, U. S. Army, Washington, and William Maxwell, M.D., of New York. The report was accepted and the committee discharged. Dr. Pliny Earle

was then unanimously elected an Honorary Member of the Connecticut Medical Society.

On motion of Dr. Chamberlain it was voted that the usual tax of two dollars, payable on and after June 1, 1882, be laid upon each member of the Connecticut Medical Society.

It was also voted that the Secretary be authorized to have seven hundred copies of the transactions of the convention of 1882 printed.

The Committee on Unfinished Business then reported as follows:

NEW HAVEN, May 24, 1882.

The Committee on Unfinished Business respectfully beg leave to report that the only subject coming under its jurisdiction seems to be the appointment of State Commissioners in Lunacy.

Your Committee finds that able reports affecting both sides of this question were made to the Society one year since, and have been published in its transactions. Your Committee is of the opinion that the State Board of Charities, as at present constituted, and as suggested in the report of the majority last year, has ample power to act in all cases which might properly come before such Commissioners in Lunacy, if appointed.

WM. M. HUDSON, M.D.,
J. V. H. CARMALT, M.D.,
B. S. THOMPSON, M.D.

The Secretary, by request, then read the law in regard to the State Board of Charities as follows:

SEC. 1. There shall be a Board of Charities, consisting of three men and two women, appointed by the Governor, and removable at his pleasure, who may inspect all incorporated hospitals, and shall inspect all institutions in which persons are detained by compulsion, to ascertain whether their inmates are properly treated, and (except in cases of detention upon legal process) to ascertain whether any have been unjustly placed, or are improperly held therein, and may examine witnesses, and send for persons and papers, and correct any abuses found to exist, in such manner as not to conflict with any personal, corporate, or statutory rights, acting, so far as practicable, through the persons in charge of such institutions, and with a view to sustain and strengthen their rightful authority; and no measures shall be adopted without the assent of the persons so in charge, except at a meeting of the Board, at which at least four members shall be present, or by a written order, signed by a majority of the Board. An appeal may be taken to the Governor from any action of the Board, by the persons in charge of such institutions.

SEC. 2. Every institution which the Board is required to inspect shall be visited by one or more members frequently, and the State prison, reformatory schools, and insane asylums, as often as once a month, and by at least one member of each sex : no previous notice of such visits shall be given to the persons in charge of the institution visited, and at every such visit, an opportunity shall be offered to each inmate for private conversation with some member of the Board. Any communication directed to any member of said Board, by any inmate of said institutions, shall be immediately forwarded to the post-office by the persons in charge, without inspection.

SEC. 3. Said Board shall make an annual report to the Governor, containing such statements and suggestions as it shall think proper.

Dr. Baker, of Middletown, said that he had expected that Dr. Nickerson, the original mover of the resolutions, would have been present to defend them, but the doctor was unavoidably detained by sickness of a member of his own family. He was not himself prepared to present the subject as it should be, and with the consent of the convention would call upon Dr. Cleaveland to advocate the claims of Lunacy Commissions. He briefly urged the need of such an organization to relieve untold misery, and investigate the causes of insanity and the means for its prevention.

Dr. Cleaveland commenced by alluding to the time the subject had been before the convention, and the settled policy of evasion with which it had apparently been treated, perchance with the expectation that the resolutions would drop out of sight. They were introduced in 1879, and in them the Society was urged to use its influence upon the Governor and legislature to secure a lunacy commission, to inquire whether insane hospitals should not be managed as other hospitals, and also recommend changes in the laws regarding the commitment of the insane to asylums, and other subjects. The second topic, relating to managing insane hospitals as other hospitals, upon mature consideration, he had concluded to abandon as not feasible. The others he still believed in, but would confine his remarks to the importance and necessity of a lunacy commission in this State. The first committee appointed reported that they were not sufficiently conversant with the subject to give advice. The second was composed of two superintendents of lunatic asylums and himself. As a matter of course two reports were rendered last year, but there was no time for their discussion, and the subject is at last ready for action.

The majority report presented very little information concerning lunacy commissions in this country, but discussed State Boards of Charities more fully. The need for a lunacy commission is, 1st, To correct abuses in asylums so that the public may know whether reported suicides and sudden deaths in them are such or due to the abuse of attendants or misuse of disciplinary measures. 2d, To discharge such hopeless cases as can as well be treated at their homes, to make room for recent cases in the curative period; for all agree that the best chance to cure insanity is in the early stages. Under present management these have to wait for a vacancy; thus the number of hopelessly insane is rapidly increasing. 3d, To investigate the cause of the great decrease in the percentages of cures of insanity. 4th, To see that the insane in almshouses and in their homes are properly cared for, and treated with a view to cure, when possible. 5th, To study the causes of insanity, the means of prevention, and to spread this knowledge before the people, in the same manner as our State Board of Health studies the causes and prevention of zymotic diseases, and spreads its knowledge before us, which facts could be obtained in no other way. We value its labors, and uphold and assist it in all ways in our power. It has justified its right to existence. In like manner a lunacy commission would demonstrate its usefulness, and if it failed it could be abolished.

The objections are, 1st, That the State is too small for such a commission. With 1,400 insane in round numbers to care for, and the other duties outlined, such a body would have few idle moments. 2d, Proper persons could not be found in the State to fill the positions. With the large number of reputable practitioners in the State he thought little difficulty would be found in obtaining three that could shortly prepare themselves for these duties. 3d, The expense would be an insuperable objection. When the objects to be secured are considered, the objection of expense should have no weight. In conclusion he based his plea on the broad grounds of humanity to aid in preventing the greatest scourge and most transforming plague to which humanity is heir.

Dr. Chamberlain denied that any settled policy of delay had been pursued by the Society. The only intentional delay was that of the first year, and the ground for that was unquestionable. The Society should never be urged to give decided opinions upon unfamiliar topics, and there was certainly no subject upon which the

average practitioners were less familiar than mental diseases, insanity, and, to a certain extent, diseases of the nervous system. This defect in medical education had been pointed out in an essay by Dr. Cleaveland himself, recently published in our transactions. When the resolutions were proposed we knew nothing, except in a vague, general way, of the value or need of lunacy commissions. The committee of general practitioners found themselves in the same predicament, and had neither the time nor the means for a complete study. They, therefore, advised the appointment of a committee of experts, to present to the Society the history, aims, and results of lunacy commissions; and, that all phases of the subject might be presented, the doctor himself was placed upon the committee.

Last year there were several special reports, and when the last ones were read, a motion was made to delay discussion until after certain routine business essential to the continuance of the Society had been transacted. When this was finished, no one was willing to remain longer to discuss any subject; the hour was so late. With regard to such commissions he had no decided objections, but failed to see how those cared for in their homes could be reached, unless the commissioners were invited by the friends of the lunatic. If abuses were charged, that would make a difference, but it is the spirit of our institutions to regard private rights as sacred.

Dr. White said that when the resolutions were first introduced, and when he was on the first committee appointed, he had been opposed to them, but upon a careful study and more extended investigation he had changed his opinion, and now believed such an organization could accomplish great good. When the miserable condition of many of the insane in alms-houses and under private care was considered, with the good that could be accomplished for the whole body of the insane in the state, the expense was not worth considering as an objection.

Dr. Stearns of Hartford, stated that as a superintendent he had no objection to such a commission in lunacy as Scotland has; indeed, were it practicable, he wished every state in the union could have such a commission. But our free institutions rendered such arbitrary powers out of the question. The radical differences in the forms of government would not allow the transfer of such powers, duties, and privileges. Although abroad every commission had a

much larger field than our state affords, still, to properly perform the duties outlined would take all the time of such a body. In order to discriminate as to those proper to be discharged from asylums, for instance, a prolonged residence would be necessary in order to enable the commissioner to judge intelligently who of the patients could safely be discharged. There is no more deceptive malady known to man, and no one in his senses would say that by a chance visit and a few minutes' inspection, such a body could select those that could best be treated at their homes. The mildest patient might have periods of raving, when an irresistible impulse to destroy seizes him. As to abuses, he denied most emphatically that any occurred where prompt punishment had not been at once meted out to the offender. These abuses by attendants are extremely rare, but as they are human, attendants will sometimes err; but what more than prompt punishment and discharge can a lunacy commission effect? A discharged attendant for misconduct very likely would misrepresent the institution from which he was discharged; hence these sensational stories.

Dr. Cleaveland stated that the history of lunacy commissions in this county had not been a brilliant one because of the determined opposition of the association of superintendents of lunatic asylums. But if the asylums themselves are left out of the question, there is work enough to be done to justify the existence of commissions in lunacy in this state. But little is known concerning the causes and the initial symptoms of insanity, and the need of systematic study in this field alone is rapidly gaining recognition. Its importance in regard to the prevention of insanity is too obvious to need argument. Our institutions, habits, modes of life, educational methods, and a multitude of influences peculiar to ourselves, require study in their relations to mental derangements. I regret deeply that time does not allow me to do even scant justice to this theme. Indeed, I have been able simply to mention it in briefest outline.

An animated debate followed, participated in by Drs. Edgerton, Hazen, Goodwin, and Wainwright, in addition to those already named. As some allusion was made to the State Asylum at Middletown, Dr. Edgerton, on behalf of the physicians of Middletown, and Dr. Hazen for those of Middlesex county, indorsed its superintendent and the management of the institution in the highest terms. Others spoke in a similar spirit. It was evident that the

almost unanimous opinion of the convention was unfavorable to the appointment of a lunacy commission. Illustrations of the strictness of discipline maintained among the attendants and helpers were repeatedly given. As the sentiment of the convention was obvious, the Secretary moved the previous question; this was carried. The question upon the acceptance of the report of the committee adverse to a lunacy commission for this state was then put, and the report accepted with but a few dissenting votes.

The Nominating Committee then presented the following list of officers, which were duly elected:

President. Wm. G. Brownson, M.D., New Canaan.

Vice-President. E. B. Nye, M.D., Middletown.

Treasurer. E. P. Swasey, M.D., New Britain.

Secretary. C. W. Chamberlain, M.D., Hartford.

Committee on Matters of Professional Interest in the State.

W. A. M. Wainwright, M.D., H. S. Fuller, M.D., of Hartford,
Geo. F. Lewis of Bridgeport.

Committee on Examination.

P. A. Jewett, M.D., New Haven, J. H. Granniss, M.D., Saybrook,
C. B. Newton, M.D., Stafford Springs.

Committee to Nominate Professors at the Medical Department of Yale College.

W. J. Beach, M.D., Litchfield, Orlando Brown, M.D., Washington.

Committee to Nominate Physician to Retreat for the Insane.

A. Woodward, M.D., Franklin, Lowell Holbrook, M.D., Thompson.

Committee of Publication.

Irving W. Lyon, M.D., Hartford.

Committee of Arrangements.

W. A. M. Wainwright, M.D., *Anniversary Chairman*, G. P. Davis,
M.D., James Campbell, M.D.

Dissertator.

H. E. Gates, M.D., Litchfield.

Alternate.

P. Cassidy, M.D., Norwich.

Delegates to American Medical Association.

Drs. Wm. Woodruff, G. H. Preston, W. S. Munger, B. S. Thompson, H. P. Stearns, R. Baker, C. H. Bill, E. P. Brewer, Wm. C. Wile, W. A. M. Wainwright.

Delegates to Maine Medical Association.

Dr. Wm. L. Kelsey, Dr. F. M. Wilson.

Delegates to New Hampshire.

Dr. John W. Bidwell, Dr. L. A. Almy.

Delegates to Vermont Medical Society.

Dr. G. B. Packard, Dr. Wm. H. Hotchkiss.

Delegates to Massachusetts Medical Society.

Dr. G. L. Porter, Dr. R. Robinson.

Delegates to Rhode Island Medical Society.

Dr. P. A. Jewett, Dr. Wm. Deming.

Delegates to New York Medical Society, 1883.

Dr. F. E. Beckwith, Dr. C. A. Lindsley.

Delegates to New Jersey Medical Society, 1883.

Dr. W. T. Bacon, Dr. J. A. Derrickson.

The Committee on County Resolves, to which was referred the resolution from the Hartford County Society, requesting the convention to amend the by-laws by assigning duties to the censors of the various county societies, reported as follows:

Resolved, To change Section 1, Chapter IV, of the Constitution, by adding the following: "They shall also appoint from among their members three persons, to be known as the Board of Censors, the duties of which board shall be to examine and pass upon the qualifications of any person presented to them proposing to enter as a student of medicine; and to take cognizance and advisory consideration of all instances of violation of the constitution and by-laws of the Society, or of the code of

ethics adopted by the Society, that may come to their knowledge, or be properly presented to them, and shall make report to the County Association of their action, whenever it shall seem to them expedient, or they shall be thereto ordered by the Association." And also that Section 7 be so altered and amended as not to conflict with this resolution, by the Secretary, and presented to the next convention.

The report was accepted, and the Committee discharged, as no other business was submitted. The amendment was referred to the next convention for action, as provided by rule.

A series of resolutions were offered by Dr. R. T. Goodwin, of Thomaston, as follows, substantially :

Resolved, That this convention reaffirm its allegiance to the national code of ethics.

That we condemn and reprobate the action of the New York State Medical Society.

That we instruct our delegates at St. Paul to oppose the reception of the New York delegation in any shape or manner.

Dr. Chamberlain moved that the resolutions be taken up separately, and it was so voted.

Dr. Wainwright moved that all the resolutions be laid upon the table. We are now, after considerable turmoil, at peace and in harmony with each other. If passed, these resolutions would lead to excited debate, and perhaps engender animosities that would be lasting. The motion was passed without a dissenting vote.

The convention then adjourned to meet the fourth Wednesday in May, 1883, at Hartford.

THE ANNUAL CONVENTION.

The Annual Convention (mass-meeting) of the Connecticut Medical Society was held in the Common Council Chamber, City Hall, New Haven, Thursday, May 25th. The convention was called to order at half past nine A.M., by the President, Dr. Deming. The exercises commenced with the reading of the Secretary's annual report by Dr. C. W. Chamberlain, of Hartford, as follows :

The past year has not been marked by any unusual features. The history of the Society shows each year a steadily increasing prosperity, unmarked by any violent changes. Its membership was never larger, nor its dues as well paid as at present. Nor is

this a spasm of honesty, but continues the same from year to year. This is true of nearly the whole State, and it is to be hoped that the indifference of the small remainder will soon be a thing of the past. It is a slight tax to pay for the benefits that accrue, the stamp of a reputable practitioner at home and abroad. Yet there are a few that accept all the benefits that accrue, with no sense of obligation to support and cherish that which grants these benefits. It is a gratifying fact that their number is rapidly growing less. Death has stricken the Society heavily during the last six or seven years, and has removed from our ranks many that could be illy spared. The President, in his address, alluded to several of these who have died during the past year. I was much struck with the public tribute paid to Dr. Lewis Williams, of Pomfret, knowing so well how richly it was deserved. I may be pardoned for quoting a brief extract from one of the papers of Windham County, an editorial article, therefore entirely unsolicited :

“ If asked at any time within the last decade to name the person who had impressed us as being the model citizen and the model Christian gentleman of this county, with little hesitation would the name of Dr. Lewis Williams, of Pomfret, have escaped our lips. Those whose rare privilege it was to come into intimate relations with this philanthropic, large minded, liberal man, the men, women, and children of his own town, for whom he did so much to encourage and help, and his fellow-laborers in Christian and humane work of all kinds, who have been inspired often by his enthusiastic words and deeds, all of these will warmly second this affirmation.”

Our Society has to mourn the loss of several of its most active supporters and most earnest advocates. Prominent among these all will recognize the names of Drs. Wilcox and Jackson. But time does not permit allusion to all our honored dead. We lose this year ten by death, which has been the average for the last six years. Their names are as follows :

Dr. Ira Hutchinson, of Cromwell, formerly a president of this Society and one of its oldest members ; Dr. L. S. Wilcox and Dr. James C. Jackson, of Hartford, Dr. Elijah Dyer, of Norwich, Dr. Lewis Williams, of Pomfret, Dr. Dyer Hughes, of Hampton, Dr. E. P. Lyman, of New Preston, Dr. J. H. Lee, of Killingworth, Dr. Joshua Blodgett, of West Stafford, Dr. F. J. Fitch, of Meriden.

There have been thirty new members added, a net gain of

seventeen, when removals are included in the estimate. The Society now numbers 450. The new members are divided among the several counties as follows: Hartford, 3, New Haven, 12, New London, 2, Fairfield, 5, Windham, 4, Litchfield, 3, Middlesex, 2.

The following are the names of the new members:

- Wm. J. Lewis, M.D., College of Physicians and Surgeons, New York, 1878, Hartford.
- H. S. Trigg, M.D., University of Vermont, 1881, Hartford.
- John M. French, M.D., University of Vermont, 1877, Simsbury.
- Nathan P. Tyler, M.D., Yale, 1879, New Haven.
- George M. Bush, M.D., Yale, 1881, New Haven.
- Charles E. Park, M.D., Yale, 1881, New Haven.
- William W. Hawkes, M.D., Yale, 1881, New Haven.
- William C. Holmes, M.D., College of Physicians and Surgeons, New York, 1880, Branford.
- F. E. Beckwith, M.D., College of Physicians and Surgeons, New York, 1871, New Haven.
- Gustave Elliott, M.D., College of Physicians and Surgeons, New York, 1880, New Haven.
- J. E. Stetson, M.D., Yale, 1881, New Haven.
- L. T. Day, M.D., Yale, 1880, New Haven.
- D. A. Richardson, M.D., Yale, 1880, Monroe.
- C. H. Howland, M.D., Yale, 1880, Meriden.
- Edward T. Cornwall, M.D., College of Physicians and Surgeons, New York, 1881, Meriden.
- E. P. Brewer, M.D., Dartmouth, 1878, Norwich.
- W. H. Dudley, M.D., University of New York, 1882, Norwich.
- James H. Ward, M.D., Victoria Medical College, Montreal, 1879, Danbury.
- Augustus M. Hurlbut, M.D., College of Physicians and Surgeons, New York, 1879, Stamford.
- Charles J. Bohannon, M.D., University of New York, 1878, South Norwalk.
- Willis Cummings, M.D., University of New York, 1882, New Canaan.
- S. F. De LaMater, M.D., Albany, 1880, Bridgeport.
- Frederic G. Sawtelle, M.D., Long Island College Hospital, 1880, Pomfret.
- Frank H. Olin, M.D., University of Michigan, 1881, East Woodstock.

Henry F. Hammond, M.D., Harvard, 1866, Killingly.

A. A. Latour, M.D., Victoria Medical College, Montreal, Grosvenordale.

F. M. Cannon, M.D., University of New York, 1867, Thomaston.

R. A. Marcy, M.D., University of New York, 1882, New Preston.

R. P. Knight, M.D., College of Physicians and Surgeons, New York, 1880, Lakeville.

J. N. Kenister, M.D., Harvard, 1872, Middletown.

The new members are graduates of the following colleges: Yale, eight, College of Physicians and Surgeons, New York, seven, University of New York, five, University of Vermont, two, Harvard, two, Victoria Medical College, Montreal, two; Dartmouth, Albany, N. Y., Long Island Hospital Medical College, University of Michigan, one each. Of the colleges represented, Yale has the lead numerically. For the last three years the figures are, Yale, 30, University of New York, 22, College of Physicians and Surgeons, 19, and for the last seven years, 54, 43, 42, respectively.

Wm. Deming, M.D., Yale, 1856, changes from Litchfield County into Hartford; Julian La Pierre, M.D., Bellevue, 1871, removes from Tolland County to Greeneville, New London County; D. A. Richardson, M.D., Yale, 1880, moves from Ansonia, New Haven County, to Monroe, Fairfield County.

The legislature passed a law embodying substantially the recommendations of the Society's Committee on the sale of poisons. The law relating to medical tramps, although fiercely assailed, was not repealed, and needed no defence. Several hearings were given to its enemies, but none to its friends, as the Judiciary Committee stated that they should report unanimously in favor of the law, so no effort was needed. It is obvious that the time is near at hand when it will be safe to add to this measure, which has proved so useful. A law was also passed ordering registrars to keep their books with the land records when no other safe place was provided. A peremptory circular was issued by the State Board of Health to registrars, concerning certain abuses referred to in the resolutions of last year, and no violations of the kind have since been reported. The transactions of the Society have been well received and favorably reviewed. It is earnestly requested that essayists will report promptly if they cannot serve. Also that when a new county clerk is chosen that the former clerk would at

once inform the Secretary of the name and address of his successor.

As the registration of vital statistics has been mentioned in connection with the special report of last year, I may be pardoned for calling your attention to a section in the amendments of the laws passed at the last session of the legislature, as follows:

“Any physician who shall have attended any person during his last sickness shall, upon application, forthwith make out and sign a certificate of the cause of death.”

This settles one difficulty in towns where burial permits are required. The physicians have doubted whether there was any direct law compelling them to promptly make out a certificate of death when asked by the undertaker or friends of the deceased. In all towns permits are required for the removal of the dead body of any person, and the registrar must have a certificate of the cause of death before he can issue such a permit. The same trouble referred to above has been encountered in such instances, the physician declaring that there was no law requiring him to make out the certificate on demand. Of course such difficulties only arise with disobliging persons, or when there is personal ill feeling between the parties at interest. There is now no room for doubt with regard to the law, and it will be enforced.

Physicians are urged to make prompt returns of births and deaths. The facts are half forgotten, and omissions mar the completeness of the returns, when they are left until the end of the year. Careful canvassing shows that from twenty to thirty per cent. are left unrecorded when returns are made at the end of the year. We are in this State paid for this service more generously than elsewhere, and there is no excuse whatever for negligence and disregard of registration laws. Our professional zeal should be enough to secure prompt and complete returns, and when emolument is added there is an additional inducement that should render us ashamed to neglect or disregard such a manifest duty, which we owe to the public and to our professed scientific character. If the people see that we, who are supposed to be intelligent enough to appreciate the value of vital statistics, are yet indifferent and careless in making our returns, what support can we hope from them for any proposed improvement in methods and collection. Our State was among the first in the world to appreciate the worth of vital statistics, and the profession have worked

hard to secure a system of returns confessedly among the best in use. Let us show by the careful completeness and promptness with which we make our returns, for the two are inseparable, that we appreciate what has been done in the past, and understand the value of accurate and complete returns in advancing rational, scientific medicine.

The report was accepted and referred to the Committee on Publication. The Secretary then read the following letter:

BATH, ME., May 21, 1882.

C. W. Chamberlain, M.D.

My Dear Dr.

I have received your notice of your annual meeting of the State Medical Society, for which accept my thanks. I had been fully determined to be with you at your annual meeting this year, but recent professional duties, I fear, will prevent my being with you, which I regret very much. I hope your meeting will be pleasant and profitable, as they always have been to me when I have had the pleasure of meeting with you.

Yours truly,

A. J. FULLER.

The President elect, Dr. William G. Brownson of New Canaan, then took the chair, and the retiring president presented the annual address, "On Some Points in the Treatment of Phthisis Pulmonalis." The address was listened to attentively and was followed by considerable discussion.

Dr. W. C. Wile spoke of the value of emulsions of Cod Liver Oil; the greatest objection to the remedy is that those who need it most cannot take it; their stomachs rebel. In some such cases emulsions are borne, especially that with the hypophosphites, which added a therapeutic agent of generally conceded value; the solution in ether, as described by Foster, deserves mention, also cream in large quantities daily, is a remedy of importance and of far greater value than glycerine, the nutritive qualities of which are somewhat problematical.

Dr. Chamberlain spoke of the ætiology of Phthisis; the researches of Fox of England were alluded to, which prove consumption to be due to inherited tendencies in but one-quarter of the cases. The other three-quarters are directly caused by unsanitary influences. These he summed up as rebreathing devitalized air, that which had been robbed of its oxygen or life-giving principles, and polluted by the products of decay resulting from the constant mole-

cular changes in our bodies, which are breathed out from the lungs in the form of watery vapor, carbonic acid, fetid animal vapors, and perchance also by the germs of disease exhaled from unhealthy systems. The exhalations from the skin add their quota also to the contamination of the air.

The second great cause is subsoil or ground water, as shown first by Bowditch of Mass., and confirmed by Buchanan in England, and others. The recent researches of Koch were outlined briefly and claimed as strengthening the views presented. Nothing would be more probable than that the tuberculous patient should exhale from his lungs, which afford homes for numerous colonies of the bacillus tuberculous, or whatever name it may be called, germs and spores which only require devitalized and weakened tissues to breed and multiply with astonishing prolificness. The weakened lung-cells and tissues, from repeated congestions induced by the irritation of bad air, constantly breathed, afford this *nidus*. Thus impure air plays a double role in the economy of consumption, so to speak. The subject and its relations were too important to be slurred over, and only the briefest allusion was possible at the present occasion.

The thanks of the Convention were voted unanimously to Dr. Deming for his instructive address, and a copy was requested for the Committee of Publication.

Dr. Wainwright then presented the report of the Committee on Matters of Professional Interest in the State. Particular attention was paid to malaria, small-pox and vaccination, consumption, and the influence of malaria upon rheumatism; neuralgia and diseases of the nervous system were discussed. Several interesting cases were read in full. He urged upon the county reporters to use greater efforts to save the wealth of material that yearly is wasted for lack of such effort.

Dr. Chamberlain reported the treatment of small-pox by hyposulphite of soda, by request of Dr. Tremaine of Hartford, who had had a large experience in the treatment of this dreaded malady.

The remedy was used in doses of five or six grains for a child every four hours, fifteen to twenty for an adult. It prevented pustulation and the vile odor that accompanies this disease, and rapidly aborts its course, inducing a speedy and safe cure. Several others who had used the remedy had given similar testimony as to its value, and no one had found it inefficacious. In the doctor's experience it had never induced nausea. Dr. Chamberlain also asked

the aid of the society in regard to the investigation concerning the ultimate cause of malaria, now commenced by the State Boards of Health of New York, Massachusetts, and Connecticut, and the National Board of Health. The experiments of Klebs and Crudelli, with regard to the bacillus malariae, were to be repeated, also those of Elkund and Laveran, and if any clue presented itself in any of the lines of work adopted it would be followed as long as it held any promise of result. He also took this occasion, on behalf of the State Board of Health of Connecticut, to ask the aid of the physicians of the state for work which the Board had commenced, especially in regard to school hygiene, and the evil results that are induced by unsanitary influences of school life and educational methods. Facts were asked for and soon just the points involved would be presented and the work outlined, meanwhile he requested the physicians to take cognizance of all cases of ill health thus produced. When visiting their patients, parents and guardians could be requested to state any cases of trouble that had directly or indirectly resulted from school life. The collateral conditions should always be reported, especially the social customs and home life if there were any unsanitary conditions about the latter. The Board had also commenced a study into the minuter forms of life in potable water, with especial relation to the causes of peculiar tastes and odors that ponded waters sometimes exhibit. In all these enterprises he hoped to receive the hearty co-operation of the profession.

Dr. White called the attention of the State Board of Health to the relation that may exist between our water supplies and the prevalence of malaria. Malarial diseases had often appeared simultaneously with the change from well and spring water to ponded water or that from brooks and rivers. He had no decided opinion as to any causative relation, or knowledge in regard to the influence of the water supplies of towns and cities upon malaria. The question was certainly an interesting one and worth investigating. He also called the attention of the Board to the relation between impure ice and disease, the carelessness shown in gathering ice from sewerage-polluted streams and ponds, was notorious. Perfect recklessness is shown, notwithstanding the idea that water is purified from all impurities by freezing has been shown to be fallacious long ago.

He also urged upon physicians to investigate the causes of dis-

eases. A wide field of study, promising fruitful results, is open to all who will work. By the recent invention of homogeneous immersion objectives many of the difficulties in microscopy are obviated, and comparatively high powers can be easily used high enough for all the practical purposes of the physician.

The President then introduced Dr. Sanborn, of Portland, Maine, a delegate from the medical society of that State to the convention. Also, Dr. W. Browning, from the medical society of Rhode Island. These gentlemen addressed the convention briefly, extending the greetings and kind wishes of their respective societies. Dr. Sanborn stated that there had never been any malaria in Maine. The climate was too cold to allow it to exist. The State could supply us with pure ice in unlimited quantities if needed, from ponds where there could be no question of contamination entertained for a moment.

Dr. Browning spoke of the appearance of malaria the past year around Mashapaug pond, in the northern part of Providence. The pond was now under the control of the health authorities, and full reports would be issued later. Previously to this outbreak there had never been any indigenous malaria in that region within the memory of any now living.

Dr. Cleveland gave an interesting account of his visit to the Massachusetts Medical Society. In accordance with rule, cases of interest and new business were then called for.

Dr. White reported an interesting case where twenty-four teeth and a mass of hair-like substance were removed from a cyst. These were not attached, neither the hair nor the teeth, but floating free in the cystic fluid.

As no new business was brought before the convention, the next exercise in order was the reading of the essays. The President announced that Dr. Nickerson, the dissertator, was not present on account of the severe sickness of a member of his family, and in consequence the dissertation would be omitted.

Dr. G. L. Porter, of Bridgeport, read a very able and scholarly essay on "The Recognition of Death." The essay was intently listened to by all present. The thanks of the convention were voted Dr. Porter for his thorough presentation of the subject, and the paper was referred to the Committee on Publication. Reference was made to the ease with which crime escapes detection from the present antiquated methods of the coroner system, and

the medical examiner system so successful in Massachusetts was advocated.

Dr. S. G. Hubbard, of New Haven, said that two disgraceful exhibitions had of late been made in this State of the inutility of the "coroners' quest law" to detect crime, and he hoped that the Society would exert its influence strongly in favor of reform. He offered the following resolution, which was warmly seconded and passed unanimously:

Resolved, That a Committee of five be appointed by the President charged with the duty of bringing before the attention of the next legislature of the State the great importance of a change in the laws providing for the detection of crime, and particularly to change the laws respecting the appointment and duties of coroners, and to advocate the appointment of medical examiners.

The President appointed the following as members of this committee:

S. G. Hubbard, M.D., Moses White, M.D., G. L. Porter, M.D., D. A. Cleaveland, M.D., C. W. Chamberlain, M.D.

Dr. W. J. Beach then read a "Protest against the recent action of the New York Medical Society, in regard to consultations." The paper was well received, and the thanks of the convention voted to Dr. Beach for his able essay, and a copy requested for the Committee of Publication. As ethical questions are to be discussed next year, in accordance with the action of the convention the day before, no discussion followed this paper.

Dr. C. A. Lindsley then read an argument against the use of proprietary medicines as demoralizing to the medical profession and detrimental to the public welfare. The essay received the closest attention throughout, and was followed by a lively discussion.

Dr. Wile, of Newtown, deprecated the indiscriminate condemnation of trade-mark preparations, as many of them were of value, and for their successful preparation required such appliances as ordinary druggists seldom if ever had. He instanced maltine as a remedy of value endorsed by as high an authority as Fothergill. Even the syrup of hypophosphites, which had been selected as a remedy of no value, had its advocates and friends. While in general he agreed with the views of the essayists, he still believed that a valuable remedy should not be discarded because it bore a trade-mark label.

Dr. Avery, of Hartford, said that either scientific methods and nomenclature were right, and the unsystematic, haphazard plan wrong, or the reverse. If the catch-word way was right, why let us discard the other and prescribe "bromidia" and the whole tribe. An instance of the harm resulting from the indiscriminate use of such remedies came under his observation recently. A lady whose physician had taught her to use MacMunn's elixir, for the relief of certain painful attacks, gave to her servant girl one afternoon, who was suffering from some slight but painful ailment, twenty drops of the elixir. At tea time, finding her still in pain, she gave the girl forty drops, and at bed time sixty. In the morning the girl was found dead in her bed.

Dr. Hill, of Stepney, said that if the doctors use such remedies their teachers and leaders first showed the way, and openly endorse them. Picking up a medical journal, which had been distributed to members, he read the names of eleven medical professors endorsing a single proprietary remedy.

Dr. Lindsley replied that no one could find the name of any professors of the Yale Medical School in such a list.

Dr. Hill replied that while this was true, the professors of other schools did so very extensively, as seen in all our medical journals.

As the hour for dinner had been reached it was moved that the other papers be read by title and referred to the Committee on Publication. The essays were on Thomas' Operation, by Prof. F. E. Beckwith, and on Specialties in Medicine, by Dr. Rufus Baker. Many regrets were expressed, especially in regard to Prof. Beckwith's paper, as several had remained for the sole purpose of hearing it. The various voluntary papers and obituary sketches were also referred to the publication committee without reading.

The following were elected essayists for 1883 :

- Geo. L. Parmele, M.D., Hartford.
- W. H. Holmes, M.D., Waterbury.
- F. N. Braman, M.D., New London.
- C. H. Bill, M.D., Bridgeport.
- B. S. Thompson, M.D., Salisbury.
- J. J. Newcomb, M.D., Litchfield.
- J. Olmstead, M.D., Middletown.

The convention then adjourned for the annual dinner at Red-cliff's.

C. W. CHAMBERLAIN, M.D.,
Secretary.

PRESIDENT'S ADDRESS.

POINTS IN THE TREATMENT OF PHTHISIS PULMONALIS.

BY WM. DEMING, M.D., HARTFORD.

Even before recent pathological investigations had demonstrated that tubercle, by its anatomical structure, has a natural tendency to recovery, the curability of a considerable proportion of the cases of pulmonary consumption was a well established fact.

It must be admitted that the disease has been, and perhaps still is, too often treated in a routine manner, and this, while there is perhaps no other malady which admits of a greater variety of treatment, according to the period and other circumstances of each particular case. If there be a disease which requires treatment of its particular symptoms, that disease is phthisis. When by proper treatment we have relieved the distressing symptoms, we have done much toward at least prolonging the life of the patient, and, if we can prolong his life beyond a certain age, our chances of effecting a permanent cure, or of at least giving him long years of comfortable existence, are greatly increased. After the age of forty-five years, says a most eminent French pathologist, it is comparatively a matter of indifference whether one has tuberculosis or not.

In this brief paper I do not propose to go into the pathology or the symptomatology of consumption. Its general symptoms, its fatality, the havoc which it has produced and continues to produce among the human race are known to us all, indeed to everybody—but there are certain varieties in its symptoms and their modes of manifestation to which I wish to call attention, and which I believe to be all-important as relating to both diagnosis and treatment.

Most important, perhaps, among all the symptoms of phthisis is the one of fever, a symptom so constantly present that, although we do sometimes see a case in which, from beginning to end, it is

altogether wanting, it is safe to say that there is seldom a case of consumption in which we do not have to meet and combat it. But this symptom presents such a variety of phases, according to the period and form of the original disease, that each case would seem to be a study in itself and to require some particular form of treatment.

For purposes of diagnosis and of treatment we may divide this fever into three periods and name it accordingly: the fever of invasion, the fever of softening, and the fever of resorption, *i. e.*, the reabsorption of the septic, and sometimes almost putrid, product formed in the diseased pulmonary cavities. We may, as regards both diagnosis and therapeutics, look upon the fever of invasion as the most important of these three. It should be recognized early, for it frequently manifests itself in so insidious a manner as to escape the observation of both physician and patient, and in such cases is only to be detected by thermometrical observation. In some cases it is very easy to mistake it for a mild form of typhoid, and this is particularly true among children. That which parents and others call by the popular name of "growing fever" will not unfrequently be found by the physician to be the invasion of tuberculosis. It may also greatly resemble gastric embarrassment, and this condition will present some difficulty of diagnosis because gastric embarrassment is a most common symptom in incipient phthisis. In such cases the fever is to be distinguished from gastric embarrassment, first, by its persistence and irregularity, and secondly, by its manner of yielding to appropriate treatment. These indications will also seem to distinguish it from typhoid. If the patient is young and comes from tuberculous parentage, we may always strongly suspect tuberculosis and treat accordingly, watching closely for further developments of the disease.

There are certain cases in which the lung presents a remarkable intolerance of the tuberculous product. In such cases we may observe the fever intensely developed before the local symptoms are enough advanced to account for its severity. In these cases the fever will be persistent, and we are not apt to see the usual morning remission, indeed it is not uncommon to see an exacerbation take place in the morning or at any other hour of the day.

In acute, or "galloping" consumption—which is only the ordinary lesions of the disease realized in a very short space of time—the fever is remarkable for its acuteness, its intensity and persistent

progress, but it is in these cases that we sometimes meet with the exceptional phenomenon of almost total absence of fever; generally, however, the fever is lively and tenacious, and the remissions are so well marked that it may even be mistaken for remittent fever. In this form of phthisis also, we often see the fever attain its maximum height in the morning.

In that form of phthisis, called by the French pathologists arthritic phthisis, the fever is peculiar on account of its disproportion to the local symptoms. These subjects generally preserve their animation, and the fever seems even to contribute to this animation. From the stimulus to the nervous and arterial systems which accompanies this fever, this form of the disease has sometimes been called "florid phthisis;" this fever may be bi-quotidian, and never has the continued and regular persistence which we see in the more common form of the disease. These subjects are more apt to be carried off by asphyxia or even general collapse than by the ordinary cachexia.

In the pure scrofulous tuberculosis the fever is not intense—almost nothing in the day time, with but slight exacerbations in the night, and the temperature hardly ever elevated.

In all of these forms of the fever the sulphate of quinine—or better still the bromo-hydrate of quinine—which possesses certain obvious advantages) responds to the indications for treatment, but the results are somewhat variable. In the fever of invasion we shall find these quinine salts the most efficacious; in the fever of the period of resorption the least so. Much will depend upon the moment of administration. It is generally admitted that quinine does not act upon the economy until about three hours after the time of its exhibition; bearing this fact in mind, we should so time the administration of the dose that it may take effect about the time that the access of the fever is expected. If we neglect this point we shall frequently be disappointed. Large doses are not necessary; beginning with doses of from three to five grains—exhibited about three hours before the expected access of the fever—we may increase gradually the dose to ten or fifteen grains. Besides its anti pyretic effect the quinine also relieves the pulmonary congestion.

In the fever of resorption the treatment should be in the main anti-septic. Quinine, having some anti-septic powers, will be found efficacious, but we shall find one most powerful agent in the

salicylic acid, on account of its remarkable anti-septic powers. With those subjects in whom the fever of resorption has appeared at a comparatively early period of the disease, and whose digestive organs are still in good condition, we may give on the first day thirty grains of the acid; on the second day, fifteen to twenty grains, and, if after three days of this treatment the fever does not yield, we should begin again (always after an interval of a few days of rest and repose) with thirty grains, and so repeat the treatment until the desired result is obtained. With those subjects whose digestive organs are not in good condition, or in children, the acid may be administered in half the above-named doses. When the effect of the medicine is obtained, as will be shown by the subsidence of the fever, we should at once withdraw it. If the acid, after a few days' trial, fails to produce the desired results, we should not blindly persist in its administration; if we do so we are very liable to get gastric or even cerebro-cardiac symptoms, which are, to say the least, disagreeable. When this treatment proves successful for a time, and after that time the fever reappears, we should repeat the treatment, always remembering to allow an interval of at least three days before recommencing it. The medicament is best administered in combination with wine or alcoholic liquor, and should always be followed by a large glass of water, to prevent intolerance and promote diuresis. If there is absolute intolerance of the acid, salicylate of soda may be substituted. This plan of treatment, carefully pursued, will frequently give us surprising results.

Of course a more general treatment is not to be neglected. Kreosote will be found to be of great service in diminishing the expectoration when troublesome. It should be given in increasing doses, and, on account of its disagreeable taste, is best administered in the daily doses of cod liver oil, or its substitutes, to which a few drops of essence of peppermint may also be added.

There are many interesting considerations connected with the use of cod liver oil. There are many respectable practitioners who never prescribe it at all; and yet its general use the world over would seem to be a sufficient guarantee of its value. It is probable that the doses usually given are insufficient, and the mode of administering it in capsules and other elegant pharmaceutical preparations, has a tendency to still further reduce the required dose. Those patients who can assimilate the largest doses of the

oil, are always those who are most benefited by it; but there are subjects who present such an intolerance of this remedy that it is almost impossible to administer it at all. Much can be done, however, in such cases, by beginning with very small doses, and gradually increasing; by this method persons who at first present an apparently insurmountable intolerance, may be brought to bear large doses with corresponding benefit. As in the employment of quinine, much depends upon the moment of exhibition. The patient, after a little experience, will generally know at what period it suits him best. When there is great intolerance of the oil, or when the fever is active and intense, and the organs of digestion consequently deranged, glycerine may be substituted for the oil. It should be perfectly pure, and should not exceed one and one-half to two and one-half fluid ounces in the twenty-four hours. If it produces cerebro-cardiac disturbance, it should be withdrawn, or the dose decreased; it may be given with the alcoholic stimulus or otherwise, according to circumstances.

Arsenic is a remedy which will often be found serviceable when other tonics are not well borne. Care is necessary in its administration, and I may mention one sign of its intolerance not generally mentioned by the authorities: a feeling of lassitude after exercise, and general feebleness of the lower limbs; these signs often appear before we get the usual symptoms of arsenical saturation, and the medicine should be discontinued as soon as they appear.

It is not necessary for me to say anything on the subjects of nutrition and climate; common sense will render these points sufficiently obvious. I may, however, say that experience has shown that high elevations, with a sufficiently high degree of temperature, have invariably given the best results.

Let me conclude by thanking you, gentlemen, for having elected me to this honorable and responsible office. In resigning this chair to my accomplished successor, I do so with the feeling, which must ever be a source of gratification to me, that at no time in the history of this Society has its prosperity been so great as at the present. May this prosperity be continuous and increasing.

REPORT

OF COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

The Committee on Matters of Professional Interest in the State respectfully report as follows:

From Hartford County, an interesting report from Dr. M. M. Johnson, on small-pox. No cases of interest reported from New Haven county. From Fairfield county, no general report.

Dr. Paddock, reporter, sends a letter from New London county, which we beg leave to refer to the brethren of that section of the state. Dr. Almy of Norwich, sends the history of very interesting cases, and Dr. Woodward of Franklin, contributes an interesting letter. Dr. B. S. Thompson of Salisbury, sends a very valuable report from Litchfield county, with the history of cases, and an interesting letter from Dr. Goodwin of Thomaston. Windham county contributes the histories of several interesting cases from Dr. Fox of Willimantic, and one of special interest from Dr. Kent of Putnam.

Dr. R. W. Mathewson, reporter of Middlesex county, sends an interesting report.

Tolland county has not yet been heard from.

An interesting point concerning phthisis pulmonalis is raised by reports from Litchfield county. Dr. Thompson says, "cases of phthisis are quite frequent in the northeastern portion of our county, more than is usual for this section. In fact, I have now under my care more cases of phthisis than I have visited altogether for the previous eight years. This state of things may be due to the anaemia resulting from malarial disease. Dr. Goodwin says, more cases of consumption also have occurred than is usual. The subject is not touched upon by other reporters.

Query. Is phthisis pulmonalis on the increase in the state? If so, is the increase due to the influence of malaria?

There are to be gleaned from these various reports some interesting facts concerning malaria.

From Middlesex county, starting at Old Saybrook, comes the very general report that there is *less* malaria than heretofore, with a corresponding increase of typhoid and acute diseases, while in New London county there is a greater tendency to malarial diseases, and in Litchfield county they are gaining ground step by step every year, except in certain localities, as mentioned by Dr. Thompson.

Dr. Woodward "says, that rheumatism, neuralgia, and scrofula have not readily yielded to established forms of treatment. This has been particularly true of rheumatism and neuralgia, and in cerebro-spinal meningitis."

Query. May not this be due to the influence of the poison of malaria, and does it not go to prove the theory now held by many physicians, that almost all diseases, nowadays, but acute and chronic, show the effect of this influence, and do better where quinine, or one of its allies is used in conjunction with the established forms of treatment?

Another question is suggested from its apparent decrease in certain localities.

Has malaria settled down upon our state, never intending to loosen its hold upon us or lift its shaking pall from the "pallid bust of Pallas, just above our chamber door," in other words, has it come to stay, or is it like the footsteps of some savage army of invasion, maching through our goodly land and leaving behind it the marks of its dire track, which may remain for a season, but finally may be obliterated by the soothing hand of peaceful time.

W. A. M. WAINWRIGHT, M.D.,

Chairman.

HARTFORD COUNTY.

The following questions were sent to the physicians in this county:]

1. How many cases of small pox have you had in your practice ?
2. How many cases occurred in persons previously vaccinated ?
3. How long since they were vaccinated ?
4. Have there any deaths occurred among those previously vaccinated ?
5. How many deaths have there been among those not vaccinated ?
6. From what source was the small pox introduced ?
7. Do you use *human* or *bovine* vaccine ?
8. Have you observed any bad results from vaccination ?
9. Has there any thing else of professional interest occurred in your practice ?

M. M. JOHNSON, M.D., *Reporter,*
HARTFORD, CONN.

Summary of reports received from questions on *small pox* and vaccination, twenty-nine physicians reported 146 cases of small pox. The greatest number of those reported by one physician is forty. Forty-seven of these had been previously vaccinated. The length of time varied from two months to sixty years.

Five deaths occurred among those previously vaccinated and eight in those not previously vaccinated. The source from which the small pox came was not definitely given in many cases—5 were from rags in paper mill, 10 from direct contagion. Bovine vaccine virus is generally used, only one reported the exclusive use of humanized vaccine.

The results are generally good. One reports a case where the arm was much inflamed, a dirty brown scab formed which dropped off, leaving a sore which discharged for a long while. He attributes it to lymph or serum with which the points are armed, from a desire to arm too many points from one sore.

Several instances of the raspberry growth are also reported.

M. M. JOHNSON,
Reporter.

A CASE OF EXOPHTHALMIC GOITRE.

IRVING W. LYON, M.D., HARTFORD.

I first saw Miss N. D., October 25, 1881. The visit, which was casual, was very brief, but during it I noted the staring and prominent eyeballs, the enlarged thyroid body, and the rapid action of the heart with precordial heaving. I prescribed the tincture of aconite, drops two, three times daily, the dose to be gradually increased to five drops.

Nov. 16 she came to my office, when I made a careful examination with the following results :

The patient, aged 24, had worked for years in a silk factory ; had noticed about three years ago that the heart's action was disturbed ; for three years past had suffered from shortness of breath ; discontinued work at the mill four months ago. First noticed the enlargement of thyroid body about three months ago.

When the prominence of the eyes was first noticed I have failed to note. The eyeballs were so prominent that the tunica albuginea showed all around the iris when the eyes were open in the natural way.

The thyroid body was very considerably increased in size and communicated to the hand a pulsation and a thrill, and to the ear a loud blowing murmur. The pulse was 120 per minute, and the action of the heart was very boisterous, heaving the chest-walls as in marked hypertrophy ; and I felt positive that in addition to this the apex was displaced considerably to the left. There were no cardiac murmurs whatever to be heard, and I concluded that the hypertrophy had been caused by the violent action of the heart, as is sometimes the case in this disease.

The patient had not menstruated for two months ; the skin was pale and the feet moderately oedematous, and she said the face was sometimes so in the morning. The liver was rather full. The urine contained no albumen. The axillary temperature at 3.30 P. M. was 100°. The appetite was fair, but the sleep was very imperfect and unrefreshing. I considered the prognosis very grave.

I next visited the patient April 23, 1882, accompanied by Dr. St. John, whose report as to the present condition of the eyes is hereto subjoined.

I had heard that the patient was better, but was not prepared to find so much improvement as had taken place. She had gained in weight full twenty-five pounds by the scales ; her color was changed from pale to ruddy, approaching about the eyes and forehead to a blush ; her sleep had become good, and she was able to exercise with much less dyspnoea. The oedema of the face and of the ankles had disappeared.

We found the eyes still quite prominent, the right the more so ; but the bulging had diminished so much from November that the upper lid

now covered the edge of the iris. The thyroid body had not grown any smaller, and still gave the throbbing and the thrill as before noted; its right lobe was larger than the left.

The pulse was yet 120 per minute, but the heart had lost the violent action which was present on the two former occasions. The impulse was somewhat more extended than natural, still we could not make the apex beat further to the left than it should be. I now think the inordinate action of the heart caused the impulse to be felt so plainly to the left of its normal site, that this with the precordial heaving had led me into error as to its size. I have omitted to mention that the menses appeared in March, having been absent since September last. All the medicine taken was half an ounce of the tincture of aconite.

The following is the report made by Dr. S. B. St. John :

"Eyeballs markedly though not disagreeably prominent. Mobility good, but internal recti muscles slightly weak, vision normal, optical media clear. Ophthalmoscope shows fundus oculi normal, except that retinal veins are larger than they should be, but there is no oedema of retina as is frequently the case when the veins are similarly engorged.

"Examination of urine—pale amber color, free from sediment. Acid reaction, specific gravity 1,020. No albumen. No excess of urates or phosphates, but slight excess of chlorides. Microscopic examination gives entirely negative results."

The progress of this case will be carefully noted and at some future time communicated to this society.

A CASE OF SECONDARY CARCINOMA OF THE SPHENOIDAL CAVITIES CAUSING OCULAR PARALYSIS AND DESTRUCTION OF SIGHT.

W. T. BACON, M.D., HARTFORD.

The disease in the case I am about to relate seems to have started on the right side of the sphenoid bone at the base of the skull. Paralysis of the ocular muscles occurred on the right side more than a week before the left eye became affected. Loss of sight was noticed first in the right eye, then a day or two before death, in the left. Smell, taste, and hearing were impaired before the patient's complete loss of sight.

The impairment of hearing was probably due to closing of the eustachian tubes by pressure. The other prominent symptoms of the case were pain, nausea, dizziness, difficulty in swallowing and talking, the most noticeable being the immobility of the eyeballs, and ptosis of the lids. On lifting the lids the eyeballs appeared slightly exophthalmic, but not markedly so, and absolutely immovable in every direction. The

pupils were [moderately dilated, irresponsive to light. The patient's mind was, as a rule, clear all through the disease, but at times she would wander for a few moments. A short time before death she had quite a severe convulsion.

At the autopsy the tumor was found covering the body and lesser wings of the sphenoid bone, extending into the orbital cavity on the left side. It had also penetrated into the nasal cavities, having destroyed the body of the sphenoid bone. All the ocular nerves seemed to be pressed upon by the tumor. Under the microscope the growth gave the characteristic appearance of cancer. Dr. Chisolm, of Baltimore, reports in the Archives of Ophthalmology for April "two cases of malignant tumor of the sphenoid cavity implicating vision." One in a boy seven years old, the other in a physician aged thirty-seven. The younger case died about eighteen months after the trouble was first noticed; the other, at the time of writing, was still suffering. No post-mortem was held in the case of the boy, but as the tumor could be seen and felt in the nasal cavity, there seems no doubt as to the diagnosis.

Many symptoms are common in the three cases, but certain are peculiar to each. In all the cases there was total paralysis of the ocular muscles coming on early in the disease. In Dr. C.'s cases blindness occurred early; in my case quite late. All were troubled with nausea, vomiting, and headache. In the case of the boy the pain and nausea passed off early, while in the other cases it continued at times during the progress of the tumor. Very little mental disturbance was noticed in any of the cases, and no general paralysis. In the case reported during the last few weeks there was partial loss of power to swallow, and difficulty of speech. The protrusion of the eyeballs in the case of Miss M. could hardly be noticed, and no tumor could be felt in the orbit, but in the other two cases disfigurement from this cause was a marked symptom. In all the cases the tumor seemed to have started on the right side of the bone, the right eye being primarily affected in each, while the left was secondarily involved both as to sight and function of its muscles. Dr. Chisolm gives no history of previous cancer. Miss M. had her left breast removed for cancer in March, 1880, which was followed in the fall of the same year by enlargement of the glands in the left axilla, and in November, 1881, by the intercranial tumor.

The following history of the case has been kindly furnished me by Dr. Brewer, late house-physician at the hospital: Miss M., age 68, spare in flesh, of a neuro-chloretic habit, prone from childhood to severe headaches, social condition single. In 1879 she discovered a tumor in the left breast, which portrayed the characteristics of carcinoma of species scirrhus. On March 26, 1880, this was removed. This, she said, was the first "scrofulous tumor or swelling" she had ever had. In the latter part of the same year some pain was experienced in the axilla of

the same arm, which examination showed to be a secondary lymphatic carcinoma. This developed very slowly, and at the close of life had attained the size of a large orange. In the summer of '81 her health seemed impaired; at intervals the bowels would become obstinately constipated, the head dizzy, and the patient would tell me that she knew she was on the verge of insanity. She would say that vertigo was so intense at times that she had to seize hold of something to prevent falling. In November the failing strength showed itself decidedly, notwithstanding active tonic treatment. On November 26th, while walking, she says she "stepped upon a leaf and slipped down," fracturing the inner condyle of the right arm. This recovered under appropriate treatment. In four or five days after the accident severe neuralgic pains were felt in the left side of the head (temporal region) of a dull, pressing character. December 11, 1881, the pain became erratic, now in the left side, now in the right, again in occiput,—nausea was very marked, and bowels constipated. Morphine and atropine were injected. December 19th, ptosis of right eye, pupils slightly dilated, and respond sluggishly to light, vision distinct and single. Pain still continues, but aching in character. Appetite improving. Sleep disturbed by hideous dreams; wakes with a jump. Morphia discontinued, and potass. brom. gr. xv and chloral gr. x, every four or eight hours, substituted. Occasionally ten drops of tr. opii. December 27th, patient's mind wanders in passive delirium; the right side of the body twitches and trembles during sleep. She has to "think hard" in order to perform any act. Constipation and difficult urination exists; the latter, however, has been a transitory symptom for the last week. Ptosis of both eyes complete; at times the pupils are irregular, sometimes the right is the larger, at other times the left. Pulse small, 108; temperature, normal. Bromide and chloral discontinued, and pot. iodide given every four hours, in two-grain doses. This disturbs the stomach, and is discontinued, as is also the quinia. January 5, 1882, total ocular paralysis, which proceeded from right to left. Pupils variable and respond to light. Sight unimpaired. Hearing dull. Smell unimpaired. Taste strange; everything tastes salt. The tongue is dry and glazed. The iodide of potash, grs. v., was again given and tolerated. The dose was gradually increased until 3 iii were given daily. This was continued four or five days, then reduced to 3 ss *ter in die*. In the last week of January iodism became manifest, reaching the maximum about February 6th. The conjunctiva was oedematous, ptyalism pronounced. From the outset of the use of the iodide muttering and delirium subsided in a marked manner, and continued in abeyance until about January 18th; then delirium and convulsive twitching of the right side of the body set in, and continued until about February 6th. From that time to March 1st both were entirely absent. February 22, 1882, the cephalgia is again severe. Tr.

hyoscyami ʒ i every four hours affords relief. Patient is able to sit up about one hour a day, appetite fairly good, hearing very dull, no noise in the ears. March 5th, smell lost; some pain in the right temporal region, not severe, bowels constipated. March 12th, offensive discharge from the nose and mouth, difficulty in swallowing intensified; pupils normal or slightly dilated. March 19th, sight entirely lost, complete paralysis of the muscles of the throat. March 26th, death by convulsions.

March 28th, Post-mortem at the hospital. The calvaria having been removed the dura mater was found much thickened, and adherent both to the skull and pia mater. The brain showed on the under surface of the anterior lobes indentations, made by pressure of the tumor; otherwise healthy. Under the brain a tumor the size of a turkey's egg was found, extending from the basilar process of the occipital bone to the crista galli of the ethmoid, about two inches antero posteriorly and one and one-half inches laterally. It entirely covered the body of the sphenoid, also the lesser wings, penetrated through the sphenoidal fissure, on the left side, into the orbit. The body of the sphenoid had been destroyed by pressure, so that the tumor could be felt by passing the finger behind the soft palate into the vault of the pharynx. It had extended forward into the posterior nares on both sides, where it could be felt. The ocular nerves were seen apparently coming out of the substance of the tumor. The growth was reddish-brown in color, quite soft, and covered with a capsule. On section it was found blood stained, and containing numerous blood patches. On section under the microscope it presented the characteristic appearance of carcinoma, consisting of round and irregular-shaped cells, with a stroma of connective tissue.

SPASM OF THE LARYNX IN ADULTS.

C. W. CHAMBERLAIN, M.D., HARTFORD.

The following cases illustrate a form of disease that closely resembles spasmodic croup in children. Indeed, all but the last case are almost identical in symptoms with *laryngismus stridulus*. In one case there was not, it is true, any inflammatory symptoms whatever which more commonly accompany this affection. The disorder is rare in adults; is, as far as I can learn, seldom encountered. I have heard of one or two cases in men that, from the descriptions given, were typical, but they have never been under my observation, so I cannot vouch for them. The frequency of the attacks varies very decidedly.

Mrs. B., a lady of refinement and culture, aged forty-five, mother of four children, two of whom had died, one in childhood, the other at about twelve or thirteen, from diphtheria, was the first case that I ever met that had all the characteristic symptoms of spasmodic croup, and, in fact, is the most typical case that I have ever seen. She was not of a nervous temperament, nor easily excited. There was not the slightest element of hysteria about the attacks. At first, of course, she was considerably alarmed when these attacks came on, but when assured that there was no danger of a fatal termination, they excited little uneasiness, that is, mental anxiety or alarm. The usual history was as follows: She would take cold from some exposure or imprudence, and the throat would be sore, swallowing difficult and painful, voice harsh and husky, with a cough sometimes dry, at other times with expectoration. In short, the symptoms of acute laryngitis. She would be awakened in the night with difficult respiration, which soon became stridulous. While expiration was perfectly easy, inspiration was almost impossible, and commenced with short gasps, then a loud whistling sound, the spasmodic action lasting several minutes before a full, deep inspiration could be made. The relief this afforded was almost magical. Sometimes one prolonged attack would be all for a night, at others they would be renewed, so that a sitting posture was kept up all night as less favorable to the recurrence. Various anti-spasmodic remedies gave relief, but my experience with the case was in the line of preventing the attacks, so that I did not see but one of them. On examination of the larynx especially, I found the membrane congested and tumefied. The action of the vocal cords was unimpeded except from the swelling of the membrane. After one or two changes I found that an application of carbolic acid solution,—one part acid to six of glycerine and sometimes a little stronger—would prevent the occurrence of spasmodic action, and finally, by a local tonic and astringent medication, varying the brush with the spray, and the internal use of phosphorus and nux vomica, or rather the phosphide of zinc and nux vomica, the attacks were almost entirely relieved, so that even an acute laryngitis did not induce them. This immunity lasted for nearly three years, when she had a slight attack. A renewal of the former treatment, and, as a matter of precaution, local treatment for each attack of acute laryngitis, for a while, again secured immunity, which lasted up to the time of her death from pneumonia several years later.

The attacks, while usually resulting from acute laryngitis, did not invariably. They sometimes came on from extreme weariness, or at least when she had become unusually fatigued. Excitement of any kind did not appear to exert any causative influence.

Case 2d, Mr. L. This patient was a man thirty-four years of age, a dealer in flour, grain, and feed, wholesale and retail, in a neighboring

village, a large manufacturing town. The attacks came on usually at night, and were never, as far as I had any knowledge of them, accompanied with any inflammatory changes whatever. In fact he was rather less likely to suffer from the attacks if he had a cold. As in the first case, the attacks usually came on at night—rarely during the day. The inspiratory efforts were very powerful, as he was a very muscular, vigorous man. The attacks were increasing rapidly in frequency, and what had at first been produced from external causes was rapidly producing a perverted nervous action, so that the attacks were not always from peripheral irritation, but from central as well. Some emphysema, and, of course, asthmatic symptoms were complications that promised to become more and more serious unless the frequency and severity of the attacks were checked. Direct local applications to the laryngeal membrane had no other than a temporary soothing influence. I became convinced that one source if not the principal cause was the fine dust which pervaded the atmosphere in which he lived the whole period of his working hours, with but slight exceptions. With great difficulty he was persuaded to wear a respirator, which would exclude the dust. After cleaning the sponge a few times, he became convinced that the instrument was a useful invention even if it had no influence upon the attacks. The frequency and severity decreased very markedly, but apparently no influence was exerted upon those due to nervous degeneration or habit, whatever the cause might be. At length the hypodermic use of strychnine in the anterior cervical regions, both sides, alternately, and Thompson's solution of phosphorus as an adjuvant, checked them entirely. The slight tendency to asthma was checked, and made no farther progress. He was fortunately able to change his occupation, and twelve months after he was unaware, from any symptoms, that there was anything out of the normal condition in any part of his lungs, nor has he had any recurrence of laryngeal or lung trouble for over two years.

Case 3d. Mrs. E., age forty-six, mother of several children, was awakened suddenly in the night by difficult breathing. She could empty her lungs well enough, but when she attempted to draw in her breath a spasmodic closure of the glottis prevented. A series of very short, panting inspirations succeeded, each accompanied with a loud whistling sound, or often like the whoop of a child with the whooping-cough; finally, with a loud, shrill whoop, a full inspiration ensued. Often she is obliged by the great feeling of oppression to jump up out of bed and walk about, bringing all the muscles of the chest to bear in the effort at inspiration. There are no inflammatory changes that accompany or in any way influence these attacks. The predisposing cause was a severe attack of diphtheria, about a year ago, which left the throat in a very weak and relaxed condition, and, indeed, was followed

by marked general weakness and debility. The membrane of the larynx and pharynx was pale, flabby, almost oedematous, the capillary circulation enfeebled. Some of the capillaries were markedly varicosed. Local treatment to restore tone to the laryngeal circulation and the nervo-muscular apparatus, which vocal gymnastics shows to be much enfeebled, has already produced a very marked improvement. Strychnia and phosphorus are also indicated, for the systemic condition as well, and a rapid improvement has followed their use. Sometimes, if she attempts to speak suddenly to a friend met by chance, or if she attempts to attract the attention of a person at a little distance by speaking louder than usual, the glottis closes spasmodically, and, after several gasps, a loud whistling inspiration very like the whoop of whooping-cough follows, after which the breathing is easy and regular. From the results of the combined treatment thus far a complete success appears to be no rash promise to make to the patient.

Case 4th. Mr. B., aged thirty-eight, a robust, athletic man, in a scuffle in New York, resisting an attack of two villains that intended robbery, he was severely choked. The throat was so injured that he raised some blood at the time. After the acute inflammatory symptoms subsided he was suddenly seized, soon after dinner, with inability to breathe—as he expressed it, to draw a breath. He could breathe out well enough, but inspiration could be effected only by a series of catches. At first the attacks were so severe that a full inspiration could not be secured until faintness supervened, but the severity decreased somewhat, so that, after a succession of catches and several shrill whistling inspirations, he could secure a full inspiration. These attacks never came on at night, but usually after eating, or when he was very much fatigued. An attempt to holla or shout would invariably cause an attack. These yielded to the hypodermic use of strychnia locally under the skin of the anterior part of the neck, one hundred and fiftieth of a grain at first, increasing to the one hundredth. I was led to use this from its success in relieving an irritable stricture of the oesophagus. Local tonic and stimulating applications were used, and galvanism, but no decided relief was obtained until the hypodermic use of strychnia. Since treatment, he has had no recurrence of spasmodic trouble for four years.

I have not included here those cases of spasmodic affections where there are inflammatory or other lesions to account for them. The first case, it is true, had acute laryngitis, but dozens of like cases had never any spasmodic trouble. The origin of the disease in all these cases, and others of which these are types, is in the nervo-muscular system of the larynx.

NEW HAVEN COUNTY.

NEW HAVEN, May 4, 1882.

Dear Doctor : In reply to your letter received some time since as chairman of the committee on matters of professional interest in the State, I regret to say that I have no report to make this year. Nothing has been received from the members of the county society, and I do not think of anything locally that would be of material interest to report.

Yours very truly,

W. R. BARTLETT, M. D.,

Reporter.

TREATMENT OF FRACTURES OF BOTH BONES OF
THE LEG.

BY W. H. HOLMES, M.D., WATERBURY.

In point of frequency, fracture of both bones of the leg stands high in the list of fractures. If this class of injuries could be arranged with reference to the difficulty of treatment, fractures of both bones of the leg would come first. In making this statement, fractures which are practically impossible to reduce, such as fractures of the spine, or those which, though they can be reduced, it is in most cases impossible by any splints or appliances to keep in place, such as most fractures of the clavicle, are not held to be more difficult to treat than cases in which good results may be attained, but can only be attained by the exercise of much care and skill. In the one class of cases, treatment is more or less inefficient but easy ; in the other, effective but difficult. The very great number of forms of apparatus that have been invented for the treatment of fractures of the leg shows how many difficulties have been encountered, and hints at the various forms of accident which are classed under this one name.

The modes of treatment to be detailed in this paper are principally such as are in use at the Boston City Hospital, where a large number of fractures are received every year ; and the cases in which I had personal experience were treated during the services

of Dr. D. W. Cheever, Dr. G. W. Gay, Dr. William Ingalls and Dr. W. P. Bolles, surgeons to the Hospital. While the main principles of the treatment of fractures differ as a rule but little at different places, still each hospital has its own favorite methods, and perhaps some ways that are peculiar to itself, and the minor details are often quite different from those of another institution. And after all, the success or failure of treatment depends very much on the apparently small and unimportant details. The general principle, that in fractures the broken bones are to be put as nearly as may be in place, retained there, and kept as quiet as possible, can only be well carried out by the knowledge and execution of a multitude of little details, and a clumsily-padded splint, an ill-applied bandage, a wrinkled strap of adhesive plaster, a little continuous pressure on the back of the heel, may make all the difference between comfort and discomfort, or even between a good and a poor ultimate result.

Out of a total of 2,172 fractures treated in four years at the Boston City Hospital, 255 were fractures of both bones of the leg, being nearly twelve per cent. of the whole number. In addition to these, there were 49 cases of fracture of the tibia alone, and 154 of the fibula alone; making in all 458 fractures of the leg, or a trifle over twenty-one per cent. of the whole. The whole number includes fractures of all kinds treated in the house and in the out-patient department. There are some reasons why this hospital should have more than its share of injuries of the lower extremities, so that the proportion of fractures of the leg may possibly be larger there than would be the case, taking all fractures as they run.

A very common way of treating fractures of both bones of the leg at this institution is to put the limb in a fracture-box. Dr. F. H. Hamilton says of this apparatus: "Boxes are rarely useful except in certain compound fractures. They are heavy and awkward machines, which prevent the patient from moving readily in bed; or which, being fixed, if he does move, allow the upper fragment only to descend, or to move upon the lower as a fixed point. If used at all, they ought generally to be suspended, or made to move on a suspended railway. But, however they are arranged, the limb is a great part of the time concealed from sight, and the surgeon is prevented from making use of such means to rectify deviations in the line of the bone as he would

probably have otherwise employed."* These unfavorable criticisms of Dr. Hamilton are not all confirmed by experience in the use of the fracture-box at the City Hospital. The box shown in Fig. 234 of his book, suspended by straps from a cradle, is a very imperfect apparatus as compared with the one about to be described; and the one shown in Fig. 236, though a little better, is still a poor one. This may in some degree account for his unfavorable opinion of the fracture-box, though apparently, from what he says, he would not approve of any form of this apparatus. The fracture-box in use at the City Hospital is an elongated box, with no top, and also open at the upper end. The foot-piece swings on a horizontal pivot, and can be fixed at any angle. The side-pieces are hinged to the base, so that they can be opened out flat on one or both sides, and when closed are held in place by a button near the foot-piece. There is a hole, near the upper edge, in each side-piece opposite the ankle, and another opposite the knee, so as to allow straps of webbing to be passed under the box, then through the holes, and over the knee and ankle, to hold the leg firmly in place. There is another fenestra in the base close to the foot-piece under the heel, so as to prevent pressure on that part. The short fracture-boxes extend from the foot not quite to the knee, while the long ones extend for a few inches beyond the knee. To apply the apparatus the foot-piece is padded with three or four layers of sheet wadding, fastened to it at the top and bottom with narrow strips of adhesive plaster. A "point" in fastening on this padding, as in all cases where sheet wadding is fastened to splints by adhesive plaster, is, after the padding is in place, to place the middle of the strip of plaster first over the wadding, and then to fasten each end of the plaster separately to the back of the splint, keeping up meanwhile firm tension on each end of the strip. This ensures the absence of wrinkles in the padding, prevents it being drawn to either side of where it should be, and contributes materially to the comfort of the patient. A sheet is then folded so as to be as wide as the base of the box, and long enough to reach from the upper end of the box to a point just short of the opening for the heel. Between the bottom of the box and this sheet, oakum is placed so as to fit the contour of the back of the leg. Sheets are folded in a similar way to be placed between

*Hamilton, A Practical Treatise on Fractures and Dislocations, Fifth Edition, page 498.

the sides of the box and the sides of the leg, extending from the foot-piece to the upper end of the box at the knee. The leg is then laid on the base of the box, with the broken bones in place as nearly as may be, the foot buckled by a strap of webbing to the foot-piece, which has been fixed at a right angle, or nearly so, to the base of the box, a piece of wadding being interposed between the strap and the dorsum of the foot. The great toe should be on a line with the inner edge of the patella. More oakum is then tucked between the bottom sheet and the back of the leg, so as to fit it perfectly. Nothing whatever is placed beneath the heel, so as to avoid the intolerable pain that results when the back of the heel rests against any solid body. But often the back of the heel is the very place where one would like to apply pressure or support to keep the fractured ends in place—to prevent the lower fragment from tilting forward. This difficulty may be surmounted in two ways : one is to pack oakum carefully under the spaces on each side of the tendo-Achillis so as to support the foot ; the other is to sling the heel in a strap of webbing, which passes under the heel, over each side of the box, then under the box, and is buckled on one side. A smooth soft piece of wadding is, of course, placed between the rough surface of the strap and the heel. By this means the foot can be kept at any required height, and the heel stands pressure very well when kept in a sling of this kind, while it will not do so if it rests on any material at the bottom of the box. The leg being in place, the sides of the box are closed and fastened, and oakum packed between the layers of the side sheets to make them conform perfectly to the contour of the leg, and restrain any tendency to lateral displacement. It takes much less time to put up a leg in this manner than it does to describe it. If it is found necessary, two more straps of webbing may then be passed through the holes in the side of the box described above, passed under the box and buckled at the sides, thus giving support to the anterior aspect of the limb, and holding it firmly, though comfortably, in place. When the leg is in the box, support is thus given to it behind, laterally and in front, and any tendency to displacement in any one of these directions is thus controlled. The accurate fitting of the sheets to all of the inequalities and natural elevations and depressions of the limb tends in no small degree to prevent shortening. The front of the leg is always open to inspection, and both sides can easily be seen by turning down the

side-pieces, which does not at all disturb the leg. In compound fractures, except those with a wound opening directly posteriorly, which rarely happens, the wound can be easily got at for the purpose of dressing. Hardly any other apparatus allows of so free an access to the leg. Any deviation which may take place in the line of the bones can be corrected by stuffing in more oakum, or removing some, in the proper place. Should the side sheets become soiled, new ones can be substituted without moving the leg. The posterior sheet can also be changed, but the leg would have to be lifted for this purpose. Of course, necessity for changing the sheets only exists in certain compound fractures with copious discharge. The disadvantage of this apparatus is that it is necessarily heavy, and that the patient cannot move about in bed; but after he has been in bed a day or so, he almost always will lie perfectly quiet during the remainder of his stay there, and rarely complains of any discomfort in so doing. Though, of course, it is possible, it rarely happens that the patient pushes the upper fragment down upon the lower one, and this objection seems to be largely a theoretical one. The patient should, of course, lie on a firm, level mattress, as in all fractures of the lower extremity, so that there can be no sagging of the middle of the bed. The swinging of the fracture-box from a cradle is not practiced at the City Hospital, though in some cases it might be well to do so. When the leg is suspended, a different form of apparatus is used there.

When it is necessary that the dressing should be one in which the patient can move about more readily, as for traveling, or if he is restless or unmanageable, side-splints will be found to be a very good means of attaining the desired end. They are not so efficient for use in some cases where there is much tendency to displacement as the fracture-box, but they are lighter, more portable, less expensive, and allow of change of position in bed. To use them, each splint is padded with a sheet of wadding so folded as to interpose four or five thicknesses between the leg and the splint, and held in place with a narrow strip of adhesive plaster at each end, and one just above the ankle. A cloth covering may then be applied snugly over the entire splint and stitched at the outer side; though this is as a rule not at all necessary; in some quite restless patients it will prevent the wearing through of the wadding where it covers the end of the splint so that the wood comes in contact

with the leg. Especial care must be taken to cover well the four corners of the splint, both at the upper and the lower end, as these in splints as usually made are quite sharp and will wear through unless well covered. Care must be taken in applying the splint that the malleoli come exactly under the fenestrae made in the splints to receive them. The older style of lateral leg-splints are made as rights and lefts, and one for the outer and one for the inner side of the leg, and the fenestrae are circular and of small size. A later form is made to fit either side of either leg and has large oval fenestrae; this is the better form, as they can easily be made to fit by proper padding, and to have a complete set of splints one need have only half as many as of the old style. Care must be taken that the head of the fibula be not pressed upon by the upper end of the splint, as if this occurs it will cause pain. If the splint is so long or so shaped that it would press on this point, pressure may be prevented by thickly padding on each side of the projecting bone. An error not infrequently made is to put several thicknesses of padding directly over such a bony prominence, or tender point, which of course only aggravates the trouble. The fracture being then reduced, the splints are then put on each side of the leg, firmly held in place by an assistant, and secured by three straps of adhesive plaster, one at the upper end of the splint, one about the ankle, and one around the foot at the lower end. A bandage is then applied over the whole, and a cradle placed over the leg to keep off the pressure and friction of the bedclothes. In cases of Pott's fracture of the fibula with outward displacement of the foot, these splints form, perhaps, as good a form of dressing as any. In this fracture, when there is much tendency to reproduction of the partial dislocation after reduction, or where the foot is much drawn back, tenotomy of the tendo-Achillis is a valuable resource. When there is much tendency to one of the fragments riding anteriorly, these splints are not generally so efficient as the fracture-box. The largest size of lateral leg-splints is generally made too flat: the other sizes as a rule fit very well. A very comfortable way of disposing of a leg which has been put in side splints is to suspend it in a Salter's swing, which, moreover, gives security against displacement by the patient's moving the limb. In the cut illustrating the application of Salter's swing from Fergusson (Hamilton, *op. cit.*, Fig. 235), it looks as if the unsupported weight of the foot

would certainly tend by its leverage to displace anteriorly the lower fragment, if the fracture were at all near the ankle.

A form of dressing that is or was used quite a little at the Hospital, is a combination of the side splints with a McIntyre's posterior splint with a foot-piece. This combination resembles in many respects the fracture box, but is considerably lighter, and the leg cannot be so easily inspected as in the latter apparatus. McIntyre's splint alone is seldom used.

Dr. Hamilton (op. cit., page 497) comes to the conclusion that extension, however useful in fractures of the thigh, is as a rule inapplicable in fractures of the leg, and gives many sound reasons therefor, which are tenable objections to the forms of apparatus he describes; but there is a way of applying extension in these fractures, when necessary, that is practicable and efficient, that was invented by a former house-surgeon at the Hospital, and is known there as "Robertson's extension." The leg is swung from a short anterior wire splint, in a similar way to the treatment of fractures of the thigh by Smith's anterior splint; but in this case the thigh is not supported, but only the leg. Strips of adhesive plaster are then laid on each side of the leg from the malleoli to near the seat of fracture, bandaged to the leg not too tightly, and attached to a cross-bar or "spreader" below the sole of the foot. A cord from the cross-bar runs over a pulley-wheel that is suspended by a stout cord from the ceiling so as to follow freely all the motions of the suspended leg, and a weight of about five pounds is attached to the end of the cord which runs over the wheel from the leg. Counter-extension is furnished by the weight of the thigh and the inertia of the body. In any case where the fracture is not quite near the ankle this apparatus may be applied, and is often of great use when there is much tendency to over-ride or shorten. Compound fractures can in many cases be easily taken care of when put up in this way, as the strip of cloth which supports the leg opposite the wound can be removed without disturbing the leg, and the wound dressed. The leg is supported from the splint, not by a roller bandage being passed around splint and leg, but by separate strips of cloth, from three to five inches wide, each of which is pinned around the longitudinal wire on one side of the splint, passed under the leg, and then pinned about the wire on the other side, so that any one piece, being independent of the others, can be removed temporarily and then reapplied.

A form of apparatus somewhat resembling the Bavarian splint has been very satisfactory in some cases, and is not especially difficult of application. The leg is first bandaged with strips of cotton wadding, then a piece of crinoline, which has had plaster of Paris rubbed into it, and has been cut of a shape to fit the leg, is moistened and applied to the leg and foot in such a way that it covers all of the limb except a space about two inches wide extending from the toes to the knee; a sufficient number of similar pieces are then applied directly over the first one to make, after it has set and dried, a firm splint; last of all, an ordinary roller bandage is applied over the whole from the toes to the knee. The next day this bandage is cut away from the vacant space left on the front of the leg, which is then exposed to view. This splint, or "plaster trough," is sufficiently elastic to admit of being taken off from the leg and being reapplied again if necessary.

After the union of the bones is firm enough to admit of some handling (as a rule, in about four weeks), the leg is taken out of the apparatus in which it has been, and is put up in a "starch and glue" bandage. In applying it, the leg is first enveloped in strips of sheet wadding, then a flannel bandage applied from near the toes to just below the knee, covering the heel; then four cotton bandages are applied, each one of which is painted after it has been put on, with a hot mixture of starch and glue. To make it, 14 ounces avoirdupois of the best white glue are dissolved in 14 fluid ounces of hot water in a glue-pot; an ounce and a half of powdered starch is then mixed with two ounces of hot water and incorporated with the glue solution; the mixture will be fit for use by adding to it about half its bulk of hot water. When applied this dries in a few hours, and forms a very light, clean, strong case for the leg. If well made, it is as hard as a board. After it has thoroughly dried it can be cut open along the front or side, its edges bound with adhesive plaster, eyelet-holes punched along the edges, and laced up like a corset or a boot. It also forms an admirable splint in many forms of disease of the knee, as it is easily removable, and can be taken off and reapplied very many times. It of course fits the leg perfectly, better than any apparatus. Its superiority to plaster of paris consists in its greater cleanliness, lightness, and elasticity; it is finer looking and less liable to crack than silicate of soda or potash.

There are of course many other ways of treating fractures of both bones of the leg, and as difficulties present themselves different men will devise different ways of overcoming them ; and there is no method that does not require some mechanical ingenuity, and some judgment to carry it out successfully.

RESOLVED, THAT THE USE OF PROPRIETARY MEDICINES IS DEMORALIZING TO MEDICAL PRACTITIONERS AND DETRIMENTAL TO THE PUBLIC WELFARE.

M. N. CHAMBERLIN, M.D., CHESHIRE.

By the term proprietary medicines, I suppose, is understood those remedies, the composition of which is kept secret from physicians and from the public, and whose manufacture is consequently restricted to a particular person or firm. Using the term proprietary in this sense, it seems to me there can be no hesitation in considering the affirmative of this question as the proper view to be entertained by all. And first in reference to the physician. Is it not at once evident that if he relies on these remedies in the treatment of disease, that he is working to a great extent in the dark? His previous knowledge of drugs, and their action in health and disease, cannot be of any benefit to him. He must rely entirely on the statement of parties whose object is not the cure of disease or the advancement of the cause of medical science, but only to dispose of as many bottles of medicine or boxes of pills as possible. "It goes without saying" that these statements are often—perhaps we may say generally—extravagant and delusive, and too often false. Nor is the statement of the limited number of persons likely to fall under the observation of a single physician, that a certain remedy, whose composition is unknown, is beneficial in certain cases of disease, of much value. In regard to well-known and uncompounded remedies, what different opinions are registered on almost every page of our Dispensatories. How, then, can any one calling himself a physician consent to enter upon any course of therapeutics, putting his own previous knowledge to one side, and trusting only to such light as may fall upon his pathway from the deceptive glare of false beacon-lights, or the feeble

tapers of ignorance? Can it be considered professional in these days of accuracy of diagnosis, that we should carefully investigate the character and position of our enemy, disease, and then strike at him with an instrument of whose nature we are ignorant? Can we be at all certain whether phenomena observed in the course of our treatment are due to the effects of the remedy, or to manifestations, perhaps abnormal, of the disease itself? Does not the history of medicine furnish many instances where, the nature of these remedies having been finally disclosed, it has been found that inert substances have been relied upon as curative in diseases which demand not only judicious but vigorous treatment. It also appears to me that the use of these remedies tends to foster in the physician a condition of intellectual inactivity and sloth. We all have some tendency to fall into the grooves of what is termed "a routine practice." How much greater this tendency when we neither endeavor to recall our own knowledge of the *materia medica*, nor refresh our minds from our books or medical journals, but rely on some secret compound, indorsed by no reliable or professional experience, whose only merit, in many cases, lies in the fact of its extensive sale from a plausible and well-worded advertisement.

Secondly, the use of these secret and proprietary remedies appears to me detrimental to the public welfare. Much has been said, of late against the prescribing of medicines by druggists, and this "counter prescribing," as it is called, has been condemned possibly with too much severity. But the druggist, if not specially well informed in regard to *disease*, at least knows something of the nature of *remedies*. On general principles, then, he is at least a better prescriber than the patient himself, or his friends, who may be ignorant, and at the best have no other guide than their own sensations and the pages of a medical almanac. I think it may be safely said that the best druggists prescribe the least, and if so is not he the wisest layman, who, when he is sick, goes to some one who has made a special study of disease, instead of consulting the advertising columns of his newspaper? It is true the physician is sometimes consulted when there is no necessity for his intervention; *sometimes* he is called *too late*; and I think the experience of all present will bear me out in the assertion that in some cases the patient has been trusting too long in the boasted virtues and curative powers of some patented bitters or restorative

pill. Something might be said on this question, from what might be called a pecuniary point of view. How often do we hear the patient say, when making our first visit, that when he was first taken sick he purchased a bottle of some patent medicine which failed to do him any good. In such a case money as well as time has been lost. It seems to me, also, that the literature, if it may be called so, of some proprietary medicines tends to foster in the public mind the erroneous idea that the practice of medicine consists in the administration of *specifics*. I say *some*, for many of them profess to cure everything, but there are not a few which profess to be sure cures for particular diseases. No one who wishes the public to receive correct views in regard to medical science can look with complacency on anything tending to confirm a belief in what, in the present state of medical knowledge at least, must be regarded as fallacious and misleading.

NEW LONDON COUNTY.

NORWICH, May 3, 1882.

MY DEAR SIR:

I regret to find myself recognized as reporter for New London County. Not that I am indisposed to do any duty or assist you in your arduous work of making a report on matters of professional interest, without facts to report, but I am ashamed to acknowledge the apparent indifference of the profession in this locality.

A while ago I sent a postal card to some of the leading members of the profession in the different towns of this county, requesting such reports, or information on medical matters as could be embodied in a report for the county. At the annual meeting of the N. L. Co. Society, I urgently requested the same from members present. I have also personally solicited others, and the result of all has been three letters: One from New London, saying that the writer had nothing to report; one from Norwich, giving an account of two interesting cases (which I enclose for your inspection), and one from Franklin. From these I am supposed to be able to gather matters of professional interest.

To begin, then, with that town most remote, Stonington, there is nothing; Mystic, another busy town, nothing; New London, with its varied interests and many physicians, nothing; Montville, where heretofore we had reports of malaria extending, nothing; Jewett City, with its busy looms, nothing; Norwich, with more physicians than diseases, nothing (one exception only); Lebanon, where unbroken bones and bruises are rapidly healed, nothing. Franklin furnishes a pleasant letter from a faithful member of the society, and this is all for New London County. In Norwich we have had no epidemic, and no prevalence of any particular disease, but the brethren generally agree that there is a greater tendency to malaria than heretofore. It would not be becoming in me to relate my own experience as the only matter of professional interest to the physicians in other parts of the State. I would call your attention to Dr. Almy's case of uraemic convulsions at the fourth month of *supposed* pregnancy, terminating with the expulsion of hydatids, the other, of remarkably low temperature in a child suffering from congenital heart disease.

Dr. Woodward, of Franklin, says malarial tendencies have been more noticed in his practice than ever before; but adds, "I have not been able, as yet, to trace these modifications to low or marshy grounds."

In conclusion, I regret my inability to give you the desired information, and hope that another report for another year may tell a better story.

Yours very truly,

L. S. PADDOCK, M.D.,
Reporter.

SOME PREVALENT TYPES OF DISEASE.

A. WOODWARD, M.D., FRANKLIN.

In yielding to your earnest solicitation, I shall not attempt to give you a particular history of the diseases that have prevailed during the year that is drawing to a close. My aim will rather be to note some peculiarities of type, rather than to give a description of individual diseases that have occurred in my practice. Malarial diseases, or malarial tendencies or leanings in disease, have been more noticeable in the sick-room than at any former period in this locality. Fevers or contagious maladies have not been particularly prevalent. But common sporadic forms of disease, as bronchitis, rheumatism, neuralgia and scrofula, have not readily yielded to established forms of treatment. This has been particularly true in complications of rheumatism and neuralgia, and in cerebro spinal meningitis. Congestive chills have been of common occurrence, even when not followed by marked fever. The tendency of these influences has been rather to impair the general health of those thus predisposed. I have not been able as yet to trace these modifications to low or marshy grounds. Further observations on my part will be necessary to point out in a satisfactory manner the cause of these changes.

Please excuse the hasty and imperfect views here expressed.

PUERPERAL CONVULSIONS WITH HYDATIDS OF THE UTERUS.

L. B. ALMY, M.D., NORWICH.

January 9th, 1882, I was called to see Mrs. T. L., a German, residing eight miles distant, who, the messenger stated, "was having fits." On my arrival I found a woman lying on the bed, insensible, face bloated, œdema of the legs, pitting deeply on pressure. Her husband stated

that she had had twelve convulsions before my arrival, and just as I entered the room she had a typical uræmic convulsion. There was a urinous odor pervading the house, which was a small cottage far from town, and the surroundings were meagre in the extreme. I drew off about $\frac{3}{4}$ ii of urine with the catheter, which was the first that she had passed for some hours, and upon testing it with the very handy pocket urine case, which is made in New York, I found that it *completely* solidified on the application of heat, so that I turned the test tube bottom side up, and the urine remained in the tube.

On making a vaginal examination, I found a uterus enlarged with a soft patulous os, which was evidently dilating. There was some hemorrhage. Her husband did not know, but thought she was about four months pregnant. She looked to me a very unpromising case. There was no hope of any good nursing; if I ordered poultices to be applied, I knew that they would not be properly used; there was no chance for hot baths or anything we might use if the circumstances were different. In the meanwhile another convulsion came on, which I controlled with a little chloroform which I had with me. I therefore gave hypodermically morphia sulph., gr. $\frac{1}{2}$, and left a solution of chloral to be given, if she became able to swallow. I also ordered a solution of potass. bitart., to be given ad libitum, when they were able to do so. I then left, telling the family to notify me in case of any change. The following morning I received word that she was better, and that they would like to have me call. On my arrival I found that she had had no more convulsions, was more sensible, had been flowing considerably, but that nothing had come away. On making an examination, I found in the vagina a mass, which I at first supposed was a placenta; but on withdrawing it, for which purpose it was necessary to introduce my whole hand, I found that it was composed of a mass of cysts, hundreds in number, which corresponded to the descriptions given of hydatids of the uterus. I found that the uterus was empty and contracted well. I gave a dose of ergot hypodermically, and a quarter of a grain of morphia, and left some tr. veratrum viride, with instructions for its use. The œdema rapidly disappeared, the mind became rational, the urine free, and in about three weeks the patient was about the house, doing her work. At that time there was barely a trace of albumen in the urine, and no casts could be found with the microscope. The peculiarity of the case appears to me to be, the early occurrence of uræmia in her pregnancy; the prompt action of morphia in controlling the convulsions, assisted, probably, by the free bleeding from the uterus, and her recovery under such adverse circumstances.

A CASE OF EXTREMELY LOW TEMPERATURE WITH AT LEAST PARTIAL RECOVERY.

L. B. ALMY, M.D., NORWICH.

In the night of April 6th, 1882, I was called to see Miss E. R., age 16 years, who had been under my care for about a year. When she was born, a seven months' child, the foramen ovale did not in all probability close, and when I first saw her, about a year ago, she was suffering from an acute attack of congestion of the liver. On the night on which I was called lately, I found her in complete collapse, and with every appearance of immediately impending dissolution. Her extremities as far as the body were stone cold, and the body itself gave a cool sensation to the touch. The face was very cold; the nose pinched and shiny; the lips purple and the finger-nails the same color. The jaw was dropped, and the breath, which came in a jerky manner, felt as though it came off a piece of ice. There was just a flutter of pulse at the wrist, which it was impossible to count.

From curiosity I took her temperature in the axilla, leaving the thermometer (Hicks', with Kew certificate) *in situ* for over ten minutes, and the index stood at 94.8° when I took it out. I gave a prognosis of speedy death, and as she was unable to swallow and was already insensible, I did absolutely nothing for her, and left the house, telling the mother that, if by any chance she should rally, to give her stimulants freely until I should come.

The following morning I called, and found my patient in much the same condition, except that she was breathing easier and had spoken some words. The pulse was feeble at 140; respiration 40; temperature 94.8° . To continue stimulants p. r. n.

In the afternoon of the same day I saw her again, pulse stronger, but about as fast; respiration 24; temperature 95.6° . She passed a comfortable night. The next afternoon she complained of pain over the region of the liver, and was coughing a good deal, with some hemorrhage from the lungs. Pulse 120; respiration 24; temperature 100.4° . I found coarse and fine rales over both the lungs, heart sounds as usual. In two or three days the pulse and temperature were both lowered, the lungs cleared up partially, and the patient was convalescent. At present writing she is nearly as well as she has ever been, and has been down stairs. The patient was in absolute collapse when the temperature was taken first, although she had hot flasks to her feet, etc., but it was the lowest temperature that ever came under my observation, and I was surprised to find any rallying power left.

FAIRFIELD COUNTY.

PROPHYLACTIC USE OF THE TRACHEAL TUBE IN
INJURIES OF THE NECK ABOUT THE REGION
OF THE LARYNX.

J. C. KENDALL, M.D., NORWALK.

The following case, which was under treatment during the summer of the year 1881, so prominently illustrates the utility (others will illustrate the desirability) of the prophylactic use of the tracheal tube in cases of injury to the larynx, and the region of the neck about the larynx as well, and made so strong an impression upon the writer that he is moved to propose the subject to the consideration of the members of the Society. Whatever may be the individual judgment on the subject, or practice in particular cases and experience with such injuries, it is always well to comprehend in treatment all contingencies and to be mindful of all expedients. Even though the progress of any case in hand does not call for action in one or another direction, it may be that some 'day some case will.

A hard-working, healthy English woman, aged 45, a cook, after a debauch which had been protracted for a week, during which drinking had entirely precluded eating, while in a state of mingled melancholy and frenzy, between nine and ten o'clock at night, inflicted the following injuries upon herself, with a long, sharp-pointed piece of window-glass: a single transverse incision through the integuments two and a half inches long, near the superior border of the thyroid cartilage; through this gaping wound the thyro-hyoid membrane was divided, and the inferior hyoid muscles severed on both sides; the thyroid cartilage was completely split through its median angle, and each lateral ala divided vertically about one-third of an inch from the median line. At the inferior end of each of these lateral vertical incisions, was a hole formed by rotating the glass, and external to the vertical incision in the left ala a triangle of cartilage, whose sides measured one-third of an inch was cut out and left hanging by a shred of membrane from an angle; the posterior wall of the larynx was disclosed, but it was impossible to ascertain the injuries within the larynx owing to irrepressible coughing; presumably the act of excising the triangle of cartilage divided to some extent the attachments of the epiglottis to the thyroid cartilage on the left side, and cut through the left muscle thyro-arytaeuoideus.

Of phenomena pertinent to this paper, there had been no syncope; there was a continuous gentle venous oozing; much coughing; respiration was carried on through the wound. After the head was flexed so that the wound was closed, respiration was gentle and noiseless for an hour through the natural passages; aphonia complete; when water was swallowed it escaped for three days from the neck; the escape from the pharynx through the larynx was felt to be on the left side; during repair of the parts respiration was wholly through the tracheal tube; ability to utter sounds was soon discovered, but they were whispers, and were produced during *inhalation*.

The wound did not heal by first intention; there was considerable expectoration (during the second week it was very tenacious); occasional attacks of coughing; matters were all forced through the tracheal tube; cough was *always* appeased by a swallow or two of water; neck was free from discomfort except on the third and fourth days, when the throat was very sore; the sense of thirst resided about the wounded parts at the end of the tube; the exhaled air was loaded with a most offensive odor, especially during the third week. For three weeks respiration was 19, next four weeks 16, pulse 72, temperature $100\frac{1}{4}$, taken about 6 P. M.; *there was not the slightest complication at any time*; tracheal tube was used for eight weeks (it is believed now that six weeks was a more commendable time); again an escape for three weeks of liquid upon the neck from the wound; the laryngeal fistula was over nine weeks in closing completely; voice is a natural whisper, on attempt at loudness a very harsh whisper; every sound used in whispering English is made spontaneously with complete accuracy and without the least accompaniment of adventitious sounds.

Can it be supposed for a moment that recovery in this case would have been possible without the employment of the tracheal tube?

The very first point of treatment was to introduce an ordinary large-sized tracheal tube. (It was seen that no vessels needed to be ligated, and no stitches were taken in the deeper parts. The fragments of the haggled alæ of the thyroid cartilage hung together owing to imperfect division of the membranes, and the whole larynx assumed natural relations.) The tube was passed through the opening left by the excised triangle of cartilage, and the external wound was closed by four interrupted sutures of horse-hair. It is believed that the tube passed external to the left vocal chord, through the presumably wounded thyroarytaenoid muscle. The utilizing of this opening will not be defended, but the claims of independent tracheotomy are recognized. The employment of the tube was most happy; no criticism upon its use in *this* case has ever reached the writer.

This article is written and presented under a full knowledge of the fact that the utility of this prophylactic tracheotomy is not

recognized by the profession, and the legitimacy of the operation is not acknowledged. It is for this very reason that the writer desires to call attention to the subject, and presumes to do it, however imperfectly, without any assumption to didactic style, and despite the fact that he has no long array of cases, and that he cannot claim much originality.

To show a contrast with the foregoing case, let reference be made to the typical history of cases which are left to nature. This reference to a summary of cases, as yet unpublished, I am allowed to make through the friendship and kindness of Prof. F. S. Dennis, of New York, a pupil of Langenbeck's. The region of the neck between the hyoid bone and the cricoid cartilage is wounded, the soft parts only, or at most a razor has cut into the thyroid cartilage, *but the mucous membrane is untouched*. This last fact is *shown* post-mortem. The surgeon closes the wound. That very night attention is called to the patient by his suddenly rising up in bed. He falls back and dies in a few seconds. Post-mortem examination reveals occlusion of the glottis by clots of extravasated blood, and infiltration of serum into the loose tissue of the parts. In justice to him, and in memorial of him as the foremost advocate of this expedient of prophylactic tracheotomy, let it be said that in one of these cases Langenbeck proposed to do the operation, but met only opposition from the surgeons present, including Esmarch, and so desisted.

The cases that receive the benefit of the operation are in two classes. In the first the suicide dies, owing to exhaustion from the loss of blood that occurred before his deed became known and he could receive treatment. While he continues to live he breathes through the tube. Obstruction to respiration is no phenomenon at death. Post-mortem examination reveals oedema, that completely closes the glottis. The objection that the oedema is one of the attendants upon the act of dying is of no force, for in the second class of cases, viz., those that recover, we are thrilled to be told that at the close of the first day the laryngoscope shows the *same condition of oedema*, and obstruction to the passage of air through the glottis.

Let especial attention be given to the fact that in all these cases referred to the wound is trivial, the mucous membrane of the larynx is unharmed, yet oedema glottidis supervenes. Note also that the region whose injury so pre-eminently and so defensibly calls for

prophylactic measures is *between the hyoid bone and the cricoid cartilage*.

Oedema glottidis, whether in medical or surgical cases, is characterised by its insidiousness, lack of decided symptoms in many cases during the first stages, and an abrupt termination. "The patient does not die gradually asphyxiated, but is suddenly seized with a spasm that terminates his existence."—Erichsen. *E. g.*: A man dining with his friends spoke in a change of voice, which the company thought was affectation; as they glanced at him he fell and died; cause of death, *oedema glottidis*. Another went to bed all right at night without any symptoms; in the morning was found dead of *oedema glottidis*, without having been conscious of the seizure. A young girl who was only slightly hoarse went out on an errand lightly clad. After returning home, while going upstairs, she was suffocated on the stairway. The case of our illustrious Washington is another instance where *oedema laryngis* ran its fatal course in less than twenty-four hours.

Of all the complications attending injuries to the anterior portion of the neck, the one most to be feared is *oedema glottidis*. The onset is insidious, may happen in the absence of surgeon and nurse, and at night. When once begun the course is often very rapid. Often the first thing that attracts attention is the spasmodic action of the patient. After the condition is recognized, even in a hospital, the termination is often reached before aid can be summoned and relief afforded. Hence the validity of the plea for the *prophylactic* operation of tracheotomy. It does not prevent obstruction to the natural passages, but it lets a man live until that obstruction can subside.

The necessity of masterly action when *oedema glottidis* is established and is recognized, will not be questioned by any one. The point of taking severe measures in view of a contingency is the one which is opposed. But, fortunately, the operation is *simple* in execution and character, and free from evil consequences. Each new case of death repeats the verdict: "Better even to have done what you branded an unnecessary operation, than to lose a life through lack of full prophylaxis."

This paper does not forget the reliance on medical treatment of this condition, but it passes it as unsatisfactory, and as impracticable outside of a hospital, while in many cases, both reliance in medical treatment and postponement of tracheotomy until

oedema of the glottis supervenes, will be sure death to the patient, as has been illustrated above, while, with the tube *in situ*, the patient cannot die of *oedema laryngis*. "It is a pathological fact of much importance, that this effusion (of oedema of the glottis) never extends below the true vocal chords."—Erichsen. This does not militate against the occurrence of the sub-glottic oedema described by Cruveilhier forty years ago. Experience shows that the pertinency of medical treatment is limited to acute idiopathic laryngitis, and even this condition may be attended by oedematous effusion, and may require surgical interference.

It is not *proposed* that *every* injury to the anterior portion of the neck shall warrant this operation, and without any study of the case. Yet let it be emphasized, that the observation of wounds in this part of the body shows that the fact of a wound in the region of the larynx calls for special study and alertness on the part of the surgeon. Certain simple wounds, all will concede, are harmless. In other cases the surgeon may hesitate to tracheotomize as a first point of treatment, but he dare not delay beyond the sign to be specified hereafter, and in no case dare he rashly leave his patient.

A summary of Witte's views, in Langenbeck's *Archiv für Klinische Chirurgie*, 1877,* bearing on the scope of this paper, gives the following :

1. Of larynx *or* trachea: (*a.*) severe concussions and contusions, with marked disturbance of voice and respiration ; (*b.*) and fracture of cartilages, indicate prophylactic tracheotomy.

2. Of trachea, in incised wounds, with free division of soft parts, and in simple lacerations, the operation *may be delayed* (not overlooked).

3. In gunshot wounds of the parts in the neighborhood of the larynx, with marked *destruction* of tissue, prophylactic tracheotomy is indicated. (*a.*) When interference with speech or respiration begins to manifest itself. (This rule is practicable only when the surgeon is under call. The subcutaneous track of a ball illustrates this destruction of tissue. In one of the summary of fatal cases referred to above, the ball entered the trapezius muscle, passed forward subcutaneously, and lodged in front of the throat, between the hyoid bone and thyroid cartilage, whence it was removed by a simple incision. At the autopsy Langenbeck found that the larynx was unopened, and the mucous membrane was uninjured. Yet the

*Quoted in *New York Medical Journal*, Feb., '78, pp. 201, 202.

man died in a few hours from the spasmodic action of the larynx dependent on *oedema glottidis*.) (b.) When secondary hemorrhage is to be feared, and the blood can find its way into the air passages. Langenbeck's words are: "In every instance prophylactic tracheotomy is indicated when after the wounding phonation seems to be compromised."

Aside from the opening case, which prompted this contribution, no discussion of grave injuries is contemplated. It must be self-evident that tracheotomy is prudent, nay, often indispensable to the safety of the patient, while it removes all liability to perturbing medical treatment, and the opening of the wound to allow ingress of air to the lungs as used to be the practice at one time. The warrant of the operation is as great as the suggestion of it is spontaneous and easy.

Punctured Wounds.—Special mention must be made of punctured wounds. Although there is so little external injury, from their very character of a puncture through the mucous membrane, they stand in a category by themselves. They are very serious, and justify interference equally with more extensive injuries.

WINDHAM COUNTY.

The following cases of interest are reported from Windham county. No general statement was made concerning the prevalent diseases of the year. An interesting fact that came to hand incidentally is that the influence of the malarial wave has begun to be felt in this region. What is especially singular is that before this was much felt, intermittent fever had become indigenous in Thompson at the extreme northeastern limit of the county and state. No malaria indigenous within a long distance in any direction. Soon after intermittent fever appeared in Providence, R. I., another advance *per saltum*, and then again in the center of this county. A death from typho-malarial fever was reported from Eastford.

ARTIFICIAL ANUS SPONTANEOUSLY ESTABLISHED.

J. B. KENT, M.D., PUTNAM.

Eight years ago patient had a swelling make its appearance just at the upper margin of the pubic bone on the right side, near the external abdominal ring. She associates this swelling with a fall which she received a short time previous, which caused considerable pain in that region, not from a direct blow, but as she says, from strain. Swelling accompanied by increased pain soon followed. She was attended by a physician who pronounced it an abscess, and proceeded to evacuate the pus by making an incision into it; the wound discharged quite freely for a day or two, then the discharge diminished gradually, some days none at all, others a thin-looking substance resembling blood and water. It never closed up entirely. In the course of time some five small spiculae of bone came away at different times, and even after this the wound showed no disposition to heal—a slight discharge being all the while kept up.

About four years later the patient noticed that she passed wind from this opening, and about the same time, matter which resembled in smell and appearance her dejections, and she soon became convinced that it was such—not large in quantity, some days none. This condition of things has kept up ever since, at the same time patient has had regular evacuations from her bowels, daily. About the same time, or soon after this, patient noticed some protrusion from this artificial opening, sometimes as large as an English walnut, but by reeling or making slight pressure it was readily returned into the abdominal cavity. She never wore a truss, not even a bandage regularly.

The above is a brief history of the case as taken from the patient herself up to the time I saw her, which was about 9 p. m. on April 18, 1882.

As I entered I found patient lying flat upon her back, with limbs flexed, suffering a moderate degree of pain, somewhat under the influence of morphine. Upon examination I found a protruding portion of the intestine about the size of a duck's egg presenting its mucous surface to view, lying external to the abdominal cavity, varying in color from a bright vascular to almost black. At first I thought the mass was composed of the invaginated intestine, presenting to view the mucous surface of the intestine, and a portion of small intestine, by hernial protrusion, making a case of artificial anus, with hernia and prolapse, but later that which at first seemed to be intestine proved to be thickened peritoneum, the thickening the result of some previous inflammation. My *diagnosis* therefore was Artificial Anus with prolapse, or invaginated intestine, *strangulated*.

Long and repeated attempts had been made by my predecessor in the case, in the morning of the same day, and again about six P. M. to reduce; but all to no purpose. I therefore made but slight taxis, but instead ordered ice to be applied to the parts as long as it was agreeable to the patient; gave one-quarter grain morphia, and returned home, stating to the family that I would return early the next morning, and that in all probability an operation would be required in order to give relief.

The next morning, April 19th, her condition was not materially changed except that she complained of weakness and faintness (by the way, I forgot to mention above that patient was seventy-six years of age). Upon etherizing her thoroughly, I found both external and internal rings very rigid and contracted, so much so that it was with great difficulty that the little finger could be forced to enter. There seemed to be a thickened condition of the surrounding tissues. An incision was made through the skin and tissues, from within outwards, down through both external and internal rings, external to the peritoneum, and the mass, after oiling it thoroughly with carbolized oil, was readily returned into the cavity of the peritoneum. The incision was closed by sutures, and carbolized cotton, covered by a compress and bandage, completed the dressing. Half a grain of morphia was now administered with a little brandy, and we soon left the patient comfortable.

April 20th, pulse 110, temperature at 11 A. M. 101 F., tongue a little dry; considerable thirst; no pain; gave one-half drop aconite tinct. every two hours, and ice to be dissolved in the mouth instead of water. April 21st, comfortable; no pain; pulse 100, temp. 99; tongue now moist; was asking for something to eat; slight discharge of pus from opening. Gave morphia one quarter grain to be given at bed-time.

April 22d, pulse 80, temp normal; no pain; complains of flatulency; gas passes out through artificial anus; April 23d, doing well; April 25th, had a natural evacuation from her bowels, and she continued to improve. May 14th she was walking about the house wearing a truss.

ACONITE IN PNEUMONIA.

C. J. FOX, M.D., WILLIMANTIC.

Permit me to cite a few results in some cases from the use of aconite as an effective agent in cutting short or controlling pneumonia.

CASE I.

Mr. A., aged 61, two years previous suffered from an attack of apoplexy, followed by hemiplegia, from which he had apparently recovered. He accidentally contracted a cold one afternoon, came home, was taken with severe rigors, with dyspnoea and pain in his right side, accompanied by a cough. About 3 o'clock the next morning I was summoned to see him, and found his temperature to be 104° , with expectorations of rusta sputa. Aconite tinct. was ordered in one minim doses every half hour for five doses, then in one-half drop doses every four hours. At 8 A. M. I saw him, during which time he had vomited twice and his bowels had opened. At 12 M. I again called, found the temperature to be 100° , and he had slept some; complained of but little cough, pain or dyspnoea. At 6 P. M. I found the temperature had risen again to 101.5° ; but treatment was followed out during the night, and on the next morning the temperature was found to be quite normal, and was so for four days thereafter, until recovery.

CASE II.

Mr. R., of intemperate habits, aged 41, of very good constitution naturally, was taken, on rising one morning, with a distinct chill, with a pain in the infra mammary region on the right side, with cough, dyspnoea and rusta sputa; pulse very quick, and temperature 102° Fah. Moist crepitant rales were present over the lower part of the right lung. I gave aconite tr. in doses of two minims every half hour for three hours and then one minim doses every four hours. The next day the pulse was better and slower; temperature 100.5° ; he had slept some during the night. On the third day the temperature had fallen to 99° , and from thence he grew steadily better each day, and was at his work within a week.

CASE III.

C., aged 5, was, one evening, taken suddenly ill. I was called to see him about 8 o'clock P. M. He was in a semi-unconscious state, with temperature at 103° , pulse 140, and respiration 58 per minute; cough, severe dyspnoea and rusty expectoration. I commenced giving aconite tr. in doses of two minims every half hour for the first two hours, when I again called, and found the temperature still at 103° , but the respiration

had fallen to 45. I continued the aconite in the same doses every four hours during the night. About 6 A. M. he vomited something, his mother said, that looked like the white of an egg, followed by a slight convulsion, after which he fell asleep. On my visit in the morning his temperature was normal, with symptoms all improved. During the afternoon the temperature rose to 99°, but thereafter was normal for three days. when I ceased my attendance, as the child had quite recovered.

In the last case, perhaps, there might have been some acute gastric disturbance; still, the absence of any symptoms distinctive of digestive derangement, together with the cough, hurried respiration and rusty expectoration, is specially suggestive of commencing pneumonia. All these cases were seen within twenty-four hours from the beginning of the disease, and I believe it is chiefly then that the drug proves so effective an agent. Further, I believe that whenever the pulse and temperature run very high, and there is no marked prostration, aconite, in regulated and careful doses, will be found especially useful in moderating vascular excitement, and in relieving all the prominent symptoms. Of course, there is nothing new in the use of aconite, as the profession have been more or less familiar with it in controlling simple inflammations. But I simply present these observations illustrating its specific value in pneumonia. Still, I do not believe aconite will cut short every case, for I have had several cases where it failed; yet I think we, perhaps, have not learned its true value in these cases.

REPORT OF A CASE OF CHILDBIRTH DURING PNEUMONIA.

R. ROBINSON, M.D., DANIELSONVILLE.

Mrs. L., American, age 38, married; mother of two children, the first of which was cyanotic, living some ten months; the second, a fine, healthy boy of 7 years.

During both of these pregnancies the mother was strong, and perfectly unconscious of any disturbance due to the pregnant condition, such as nausea, œdema, etc.

Shortly after the third conception, occurring early in the summer of 1880, she began to suffer from an indefinable fear and nervousness, attributed by the patient to a chill experienced after going into salt water.

This condition continued during the entire pregnancy, accompanied with the most persistent nausea and retching, notwithstanding the various remedies so commonly used, as oxalate of cerumen, ingluvin, chloral enemias, etc. Constipation was not relieved by laxatives or

cathartics; but during the last few weeks one-quarter grain of ext. belladonna at night would give a movement in the morning.

The fear of the mother that the child would in some way be deformed or marked was intense, and a source of constant worry to her, requiring repeated assurances to the contrary. When a little more than eight months pregnant, while suffering from a severe attack of bronchitis, she received a telegram announcing the sickness of her father. She felt a convulsive throb through the abdomen, or, as she expressed it, a shiver, followed by a cessation of all fetal movement.

During the next twelve hours she had repeated chills, with flushed face, more or less delirium, and severe stabbing pains just below the right breast.

When called to see her, I found the temperature 105° , pulse 110, respiration short and rapid, each expiration accompanied by a groan. Applied hot compresses, and gave morphia to allay the pain and quiet the constant coughing, partially but not fully succeeding.

Twenty-four hours after the first chill, and with a temperature of 105° , labor came on, and was completed in less than one hour, the child being perfect and weighing nearly eight pounds, but making no effort to breathe. The heart beat very feebly. I immersed the child in water as hot as could be borne, establishing respiration in half an hour. The nurse was allowed to dress the child in the usual way, but in an hour called attention to the fact that the child didn't seem to breathe, and was cold and blue.

Placing my ear over the heart, I could detect pulsation. The respirations took place once in from one to three minutes. No effort was made to swallow when liquids were put into its mouth.

Supposing that the child would without any question die in a few minutes, and attention to the mother being almost constantly demanded, I ordered that the child's clothing should be taken off, and that it be wrapped in hot blankets, changing every five minutes. To the surprise of all, after this process had been continued for some hours, the heart-beat was stronger, the respiration deeper and more frequent, and at the end of four hours the child had succeeded in swallowing a little warm milk. After this we had no trouble with it, and its condition was as favorable as could be desired.

But to return to the mother. The pleuritic pain continued with unabated violence, while auscultation and percussion revealed the fact that consolidation was taking place in the right lung.

During the next twenty-four hours the whole lung became one solid mass. The cough was persistent, the sputa heavy and rusty. During the next seven days the temperature persisted in remaining 105° , notwithstanding twenty grains of quinine were given night and morning. The patient was more or less delirious during this time. She could get

but little sleep after the second day on account of the amount of heavy sputa raised from the diseased lung. For some forty-eight hours she did not sleep over five minutes at any one time. She was obliged to stimulate freely on account of intermittent action of the heart with loss of the second sound.

The patient took one pint bottle of champagne per day, and from one-half to one ounce of whisky every four hours. Nourishment consisted of from one to two quarts of milk in the twenty-four hours.

Finding that the large doses of quinine did not in any appreciable degree lessen the temperature, and produced nausea, I ceased giving it and substituted carbonate of ammonia. The first dropping of the temperature took place upon the eighth day, and from this time to the twelfth it oscillated between 102° and 104° ; then dropped to 100° , and reached normal during the latter part of the third week.

From this time forward convalescence was steady and uninterrupted, the lung clearing up perfectly, the cough entirely disappearing, the mental condition clearing up as the patient regained strength.

The fact of giving birth to a child during the attack of pleuro-pneumonia did not seem in any way to influence the progress of the disease, unless a retarded convalescence might be attributed to it.

Possibly a tympanitic condition, with tenderness over the lower part of the abdomen, might be due to the puerperal condition, though this is not an unusual occurrence or phase in uncomplicated pneumonia.

The value of alcoholic stimulants in some grades of acute disease was well illustrated in this case, for on reducing the quantity for a few hours only, the patient's increased delirium and the intermittent pulse warned us against any further attempt of the kind. Another marked feature in this case was a rapid slowing of the pulse during resolution, dropping from 120 to 90 in 24 hours, from 90 to 75 during the next 24 hours, and from 75 to 60 during the third 24 hours. After remaining at 60 for a couple of days, it began to increase again and in three days was 120.

The question of blood-poisoning from rapid absorption from the diseased lung tissue is here of interest and worthy of consideration.

Another point is, how much the nervous shock to the mother from the telegram had to do with the absence of foetal movement after receiving it, and the difficulty in establishing respiration after the child was delivered.

LITCHFIELD COUNTY.

W. A. M. WAINWRIGHT, M.D.,

Chairman of Committee on Matters of Professional Interest.

DEAR SIR : During the past year there have been more epidemics of diseases of children than in the year 1880-81 ; but the deaths have been few. Within the last six months diphtheria, scarlet fever, whooping cough, measles, chicken-pox and mumps have prevailed in Salisbury, Canaan, and a portion of Sharon ; and from intelligence gained by medical men, other towns in the county have been visited by the same diseases, but, as a rule, in a light form. Cases of rheumatism and phthisis are quite frequent in the northwestern portion of our county, more than is usual for this section. In fact, I have now under my care more cases of phthisis pulmonalis than I have treated altogether for the previous eight years. This state of things may be due to the anæmia resulting from malarial disease. We all know that broken-down subjects, who have passed through severe attacks of chills and fever, are fit subjects for phthisis. I can safely state, however, that malarial diseases are rather on the decline in our county, with few exceptions.

Dr. W. S. Munger, of Watertown, writes that pneumonia has been prevalent in his section more than in eighteen months previous. All recovered with the exception of two. He speaks of a considerable amount of malarial disease for the past three months, but no cases at the present time. Two cases of chorea are mentioned. one a girl of 16, who is nearly well ; the other, also a girl, about 8 or 9 years of age, who is improving.

Dr. R. S. Goodwin, of Thomaston, reports as follows :—

In reply to your request, I would say that the year has been one of very little medical interest in this locality. We have had no epidemics of any kind—at least, no diseases sufficiently prevalent to be dignified by the name of epidemic. There is no question but that malarial diseases are gaining ground here, step by step, every year. I have seen several cases of genuine tertian ague, which have certainly originated here. And while malarial diseases are on the increase, it is also quite apparent that typhoid fever, in its typical form, is becoming more rare. I do not think I have seen or heard of a case during the year.

We had very little cholera infantum last summer. This is a

disease which, in former years, has been fatal and common in our village.

We had an unusually small number of cases of pneumonia last winter. I do not remember a single fatal case.

This spring there have been a few sporadic cases of scarlet-fever, measles and chicken-pox—none of them of a severe character.

Several of our older people have died from apoplexy—rather a larger percentage than usual, I believe.

More cases of consumption, also, have occurred than is usual.

Diphtheria has not prevailed here to any extent.

Small-pox has not visited us, although it has appeared in the adjoining towns, above and below us, in the Naugatuck valley.

I had under my care recently an exceedingly *obstinate case of chorea*, in a girl of 17 years, the subject of long-standing bilateral chorea, who had been treated during many weeks with the usual remedies—tonics, etc.—without much effect. She was not anæmic, but thin and haggard from the constant jactitation and loss of sleep. Sleeplessness was a marked feature of the case from the beginning, and half-drachm doses of chloral were given at night, with the effect of procuring some sleep, but with no abatement of the choreal movements by day. I now resolved to try the effect of keeping the girl under the continual influence of the chloral. She was ordered to take eight grains three or four times a day. This was afterwards increased to eight grains every four hours throughout the day and night. This treatment was continued for nine days, by which time all choreal movements had entirely ceased. The girl was excessively drowsy and languid all through the day, but ate well, and the digestive functions were not interfered with. After a little quinine and iron to recruit her strength, this girl left town quite restored.

In three cases under my observation, within the last two years, I have been able to verify *the new and useful sign of death* first pointed out by Dr. Larcher, of Paris, in 1870. It consists in the presence of a blackish, at first not perceptible, spot in the sclerotic, which grows darker and darker. It is visible first on the outer side of the pupil, then shows itself nearer and nearer the inner corner, draws closer to the center of the organ, and at last unites and forms an elliptical segment on the lower convexity of the eye. At first the shape of the spot is round or oval, occasionally triangular, with its base towards the cornea.

This black spot, according to Dr. Larcher, signifies the change

from rigor mortis to putrefaction ; “ it is the sign of death, the herald of corruption ; the cadaveric imbibition of the eye in the manner here described is the earliest certain sign of death.” It is doubtful, however, whether there is any *imbibition* in the case, as the pigment does not become soluble, and the tissue cannot imbibe it. The phenomenon, according to Professor Liman, is rather owing to the drying of the sclerotic in that portion most exposed to the air, and as it thus becomes more transparent, the choroid can be more or less distinctly seen through it. Whatever the explanation, the fact remains a valuable one.

Yours very truly,

BRADFORD S. THOMPSON, M. D.,

Reporter for Litchfield County.

Salisbury, Conn.

THE PREVENTIVE AND CURATIVE TREATMENT OF POST-PARTUM INFLAMMATION.*

BRADFORD S. THOMPSON, M.D., SALISBURY, CONN.

We all know that early, prompt, vigorous, but judicious treatment will greatly lessen the mortality of women from post-partum inflammation. If the *accouchement* has been tedious ; if the pains have been violent ; if turning has been had recourse to ; if instruments have been used, or if there has been an adherent placenta, there is great danger of metritis, peritonitis, metro-peritonitis, pelvic cellulitis, puerperal phlebitis, toxæmia, etc., setting in ; and in apparently easy and natural labors, one or other of these dangerous conditions may ensue which will demand the best efforts of the medical attendant. In some seasons, we are aware, there is a tendency for puerperal patients to become victims to these post-partum inflammations ; and, of course, when this epidemic constitution of the atmosphere exists, we should be still more sedulously attentive to our patients, and apply every prophylactic within our reach without delay. The following cases are recorded for the purpose of illustrating the treatment we follow :

CASE 1.

Mrs. B., 38 years of age, a primipara, taken in labor on the evening of the 18th of January, 1871. A medical student was in attendance until 3 P. M.

*Read before the Litchfield County Medical Society, April 25, 1882.

the next day, at which time the membranes ruptured and a large loop of the umbilical cord protruded from the vagina. I was then sent for, and found about fifteen inches of the prolapsed cord in the vagina, the fetal head still high up, and seemingly resting on the superior margin of the pubic bones. The labor-pains had been very severe since their commencement, the patient appearing to suffer great torture at the region immediately above the pubis; the pains in this region being sharp and lancinating. Her pulse was quick, hard and wiry, and there was considerable tenderness and fullness in the lower part of the abdomen, occasioned, most likely in great part, by retention of urine. I caused the patient to get up on her feet in the bed, then to stoop forward with her head down on the bed so that her pelvis was well elevated, when I had little difficulty in returning the cord over the child's head; she was kept in the same position until she had a strong expulsive pain, when the head entered the superior strait so as to prevent the egress of the funis again. She now urinated freely, and I thought that the difficulty was nearly over; but I was mistaken, for, although the pains continued for two hours with great violence, I believed that the child would not be born alive without instrumental assistance. A warm salt and water injection was administered, which thoroughly emptied the rectum, and applied the forceps and delivered a healthy male child, weighing nine and one-half pounds.

The placenta came away without any trouble, and the sanguine discharge was normal; but the patient seemed feverish and irritable, the pulse still quick and wiry, and the abdomen tender on pressure. I wrote the following prescription:—

℞ Sulphate Morphia, grs. iiii.
Co. Tinct. Cardamon, ℥i.
Co. Spts. Lavender, ℥i.

M. Of this solution the patient was to get a teaspoonful every two or three hours, if in great pain or very restless. I also prescribed twenty grains of bi-sulphite of soda in a tablespoonful of sweetened peppermint-water every three hours, and a piece of flannel, saturated with turpentine and camphorated oil, placed over the abdomen under the binder. The room was directed to be kept at an even temperature. I visited the patient early next morning, and found her still feverish, that same hard, quick, wiry pulse, great thirst, anxious and restless, with much abdominal tenderness. The after pains would come on very severe if the morphia was omitted for a longer period than two hours. I now ordered three drops of Norwood's tincture of *veratrum viridis* to be given every hour and half until the pulse came down to 80, or until nausea ensued; the bi-sulphite of soda to be continued, the morphia mixture also to be given in sufficient quantities to keep the patient easy, and the

continual application of the turpentine stupes to the abdomen; and light nourishment. Although the patient had urinated, and the uterine discharge was free and natural, I injected a weak solution of chlorinated soda, warm, per vagina.

I visited the patient again in the evening, and learned that the remedies had been given regularly all day as directed; she had taken some seven or eight doses of the *veratrum viridis*, and was now nauseated, and had the pulse lowered to near 80. The remedy was discontinued, but to resume its use if the skin became hot and dry, and the pulse became much accelerated. The skin was now moist, the thirst abated, and the abdominal tenderness not so great. I directed the continuance of the bisulphite of soda, and enough of the solution of morphia to ensure repose, and also prescribed five grains of quinine every four hours. At my visit on the following morning there was still some abdominal tenderness, with slight tympanitis, the pulse 87, thirst not so great, and countenance more composed and placid. The skin had become dry and the pulse accelerated during the night, when two doses of the *veratrum* reduced the fever. The quinine and the bisulphite of soda, with an occasional dose of morphia, were kept up for the two or three following days, and the patient made a good and permanent recovery.

CASE II.

Mrs. O., 32 years of age, was taken in labor on the evening of the 23d of February, 1874, being in her fifth confinement. Her previous labors had all been foreseps cases, one of which I had attended; and knowing that the case would be tedious, and finding that the pains were far apart and trifling, I went home, and was not again sent for until 7 o'clock next morning, when I found her with strong pains every six or eight minutes; the os uteri dilated over the size of a dollar; the membranes intact, and the head presenting. I again left to visit other patients, and returned a little before noon, and found that the membranes had just ruptured, the os fully dilated, and the head engaged in the superior strait. The pains came regularly every five minutes, and were strongly expulsive; but after the fetal head got about half through the superior strait it became impacted, and at 3 o'clock P. M. I concluded to wait no longer on the natural powers, but to employ the foreseps. I was nearly an hour exerting my utmost strength before I succeeded in extracting the child. It was a very large boy, still-born, but by the usual means of resuscitation it was gradually restored, and seemed in good and vigorous health for two days, at the end of which time it was violently seized with *trismus neonatorum*, and died in about twelve hours.

Although the placenta was easily delivered, the hemorrhage not excessive, and the uterine contracted tolerably well, I was fully appre-

hensive of some form of post-partum inflammation, and at once applied a flannel pad, saturated with turpentine and oil, under the roller, which was firmly applied. The morphia mixture was ordered to be given sufficiently often to keep the patient easy and composed, and I left with instructions to the nurse how to manage the case during my absence; and to send at once for me if any violent symptom should ensue. I was called early in the morning, and found that the patient had been seized about an hour before my arrival with a severe chill, which was soon followed by nausea, thirst, severe abdominal pains, and a very hot skin, quick pulse and high fever. I at once ordered four drops of the tincture of *veratrum viridris* every two hours until the fever should abate, and also twenty grains of the bi-sulphite of soda every three hours; injected a warm solution of chlorinated soda into the vagina. Kept up the turpentine stupes to the abdomen, and advised the free use of the morphia so as to completely subdue the pains. I did not see the case again until 9 o'clock at night, and, although the veratrum had been sedulously administered, the pulse was over one hundred, hard and wiry; there was considerable tympanitis, and great tenderness in the uterine region; the organ itself very large, the urine scanty, and voided with pain. I ordered the tincture of veratrum to be continued until the pulse should be reduced below 80; increased the dose of the bi-sulphite of soda to thirty grains every three hours; the morphia to be kept up, and the turpentine fomentation to the abdomen, with an occasional vaginal injection of liquor sodæ chlorinata.

At my visit on the following morning I found the pulse down to 65 (the tincture of veratrum had been given every two hours all night); there was still great uterine soreness and tenderness, severe pain in the back and hips, urine very scanty and voided with pain, mind wandering, and patient very restless. The veratrum was now omitted, with directions to resume it if the pulse should rise above 80; ordered three grains of quinine every three hours, the bi-sulphite to be given as before, and the morphine in sufficient quantity to keep the patient composed. The injections and turpentine embrocations to be continued as before. This course of treatment was pursued for five or six days, after which the patient gradually but slowly convalesced.

CASE III.

Mrs. R., a leucophlegmatic, primipara, 36 years of age, sent for me April 6th, 1878. I found an arm presentation. There had been a nurse in attendance for a few hours before my arrival; but as soon as the membranes ruptured and the fetal hand protruded from the vulva I was hastily summoned. The patient was sadly despondent, with scarcely any pain, the bowels and bladder empty, and the uterus freely open. I proceeded to turn the child, having first given a dose of Battley's Seda-

tive with the view of giving strength to the expulsive pains after the version was accomplished, which opium will do when first administered. I had great difficulty in turning from faint-hearted shrinking of the patient, but after the feet were brought down there was no further difficulty; she had two or three good pains, and the child was born alive and well. I left my patient quite comfortable, and instructed the nurse to administer a teaspoonful of the fluid extract of ergot if there should be too much hemorrhage. On the following day I found she was not doing very well; although the flow had not been too copious, and no after pains, still she had not slept, seemed despondent and anxious, with thirst and a feeling of debility. the pulse 112, no inclination for food or any exertion of mind or body. There was slight soreness all over the abdomen, and, indeed, general malaise. She was put on a solution of morphine and quinine, one-eighth of a grain of the former and two grains of the latter, every two hours, with beef-tea. That night my patient became very bad; the pulse got up to 130, the thirst was intense, and the mind wandered greatly. In addition to the morphia and quinia, I ordered three drops of the tincture of veratrum and twenty drops of aetheris spiritus nitrosi every two hours, until the pulse came down to 80, or nausea should occur. On the next day I found the pulse reduced to 90, but there was still great thirst, uneasiness, despondency, and mental derangement. There was now a severe diarrhœa, the evacuations thin, dark and very offensive. An injection, consisting of half a grain of sulphate of copper, three grains of pure crystallized carbolic acid, two drachms of glycerine, and six ounces of peppermint-water, was thrown up the bowels, and ordered to be repeated every four hours until the diarrhœa was checked. The morphia and quinia solution every two hours, and an occasional dose of the veratrum and nitre if the pulse was over 60; the morphia and quinia were kept up, and, although the patient remained in a very precarious condition for five or six days, she finally made a good recovery.

In the April number of the Richmond and Louisville Medical Journal for the year 1869 will be found a case reported by me, of adherent placenta with profuse flooding, followed by metritis and toxæmic fever, which exemplifies the clinical history of that form of puerperal disease, and the results of the remedial measures above indicated. Many cases of post-partum inflammation could be mentioned, which were not apparently of graver character than those now recorded, but which, nevertheless, terminated fatally under the old treatment of bleeding, blistering and mercury. In all of these cases great importance is attached to wise hygienic measures, proper ventilation, perfect cleanliness, vaginal injections of chlorinated soda, permanganate of potash, or carbolic acid, with proper nutrition; flaxseed poultices, moistened with turpentine and oil, kept constantly over the abdomen, and perfect quiet

The administration of opiates on the very first threatening of inflammatory action is not so universally insisted upon as it should be. I believe that the early, prompt, and free use of some preparation of opium has often saved the patient from a very violent attack, or even sudden death, in these cases; that, by keeping the patient constantly under the influence of this anodyne, we may promote a speedy convalescence.

Whether or not the alkaline bi-sulphites possess much power as anti-zymotics and anti-toxæmics is still *sub judice*; but there can be no controversy about their virtues as anti-pyretics and refrigerants. There seems a tendency in modern practice to use means that will effect a lowering of the temperature of the patient in all inflammatory diseases, and by recent observations and experiments I am convinced that the bi-sulphites and the veratrum viridi are the very best refrigerants and anti-pyretics we are acquainted with, not only in the diseases under consideration, but also in acute rheumatism, typhoid fever, pneumonitis, etc. By the constant use of the bi-sulphite of soda or magnesia, and by the occasional use of veratrum for the first few days in these puerperal inflammations, we may keep the pulse below 90, so that the early use of quinine and other tonics can be safely indulged in, and speedy recovery promoted. By the frequent use of the antiseptic vaginal injections the cleanliness and comfort of the patient are greatly enhanced. If in the few suggestions here submitted one brother practitioner is aided in the management of these dangerous accidents of child-birth, whereby even one suffering woman is relieved, I shall feel abundantly repaid.

MIDDLESEX COUNTY.

DR. W. A. M. WAINWRIGHT,

Chairman of the Committee on Matters of Professional Interest.

I send report as far as I have it :—

REPORT FOR MIDDLESEX COUNTY.

Portland, Drs. Hammond and Sears : Less malaria, more typhoid, some scarlet fever of a mild form.

Dr. Worthington, of Middle Haddam : Less malaria, more typhoid, some pneumonia.

Dr. Baker, Middletown . Same as Dr. Worthington.

Dr. Nye, Middletown : More typhoid and acute diseases.

Dr. Hazen, Haddam : Less malaria and more sickness and typhoid.

Dr. Granniss, Old Saybrook : More typhoid and sickness, with less malaria.

Dr. Gilbert, Westbrook : Malaria same as before ; more typhoid and more sickness.

Dr. Mathewson, Durham and Middlefield . Malaria about the same ; less sickness the past winter than usual.

R. W. MATHEWSON, M.D., *Reporter.*

ESSAY.

RECOGNITION OF DEATH.

BY GEO. L. PORTER, M.D., BRIDGEPORT, CONN.

The distinction between apparent and actual death is often masked. The two conditions may so closely resemble each other as to deceive the judgment of superficial observers and demand professional scrutiny.

The report of a single instance involving a probability of the burial of the living is remembered as a fact, long after the locality and time are forgotten, or the story has been disproved. The tragic interest of such an event, and its easy adaptability to their purposes, has made its occurrence a frequent incident in the plot of poet, novelist, and dramatist. The recorded cases incontestably proven are few where the living have been buried, but it is the opinion of many that they are constantly taking place, and that such a fate may be their own experience is, with some, almost a monomania. Such a belief, although based upon credulity and built by fancy, is no less full of terror; for what calamity could equal in horror that which would overtake one, who, conscious of what goes on around him, is unable to communicate the fact that he still lives, and realizes that the loving care and ministering hands of relatives and friends are destroying all hope of escape, are obstructing all means of resuscitation, and are irrevocably sealing his doom. Or can we fancy the mental and physical torture which would seize upon him who should wake from unconsciousness within the narrow bounds of the coffin or the walls of the tomb! Juliet shudders at the thought of a premature awakening in the tomb of the Capulets—

“An ancient receptacle,
Wherein these many hundred years, the bones

Of all my buried ancestors lie pack'd—
 To whose foul mouth no healthsome air breathes in.
 A laek! alack! is it not like that I,
 So early waking,—what with loathsome smells
 And shrieks like mandrakes torn out of the earth,
 That living mortals, hearing them, run mad:
 Oh! if I wake, shall I not be distraught?
 Environed with all these horrible fears,
 And madly play with my forefathers' joints?
 And pluck the mangled Tybalt from his shroud?
 And in this rage, with some great kinsman's bone,
 As with a club, dash out my desperate brain?"

Such a fear entitles a client to receive from his family physician a satisfactory answer to these two questions, what occasions the state called apparent death? and by what test may it be distinguished from actual death? and the physician is bound to understand the cause, to estimate the value, and to recognize the result of the many tests by which the two conditions may be discriminated. The saddest duty of the profession is to pronounce the word which removes all hope of recovery, which announces the presence of death, and at such a time, to make any palpable mistake of judgment would arouse harsh criticism, and be long remembered.

Theoretically every diploma presupposes that its owner is familiar with the phenomena of death; but many are the graduates who have never actually witnessed in a human body the termination of physical life.

Apparent death may result from natural causes, from disease, or from the action of drugs. Suspended animation, technically asphyxia without pulse—is the term used to describe a state or condition of the body where there is a suspension of objective signs in an organized living being, who is endowed with sensation and the power of voluntary motion, but there is not a total cessation of all vital action. In many cases comparatively, the graphically recalled thoughts of the victims prove that the functions of the brain were stimulated by fresh blood, and, in no case, is it believed that the circulation is completely stopped.

Hibernation is perhaps the most common and conspicuous example of this condition, and the one which has been the most carefully studied. Locomotion is resigned. In a convenient spot the animal sleeps. The respiration is manifest at longer and longer intervals, and finally is not perceptible; the heart-beat is

slowly, and still more slowly performed, until it may be recognized only by the most careful examination, and by the unpracticed ear not at all; the temperature falls, and hibernation is complete. A pure case of suspended animation, but not death. After a comparatively brief period of complete non-circulation, in warm-blooded animals, animation cannot be recalled. To recognize the necessity of this result is but to recall the physiological action of blood-circulation depending upon the stimulation of oxygen. Oxygen may pass in small quantities through the skin, and thus, sufficiently for preserving life during hibernation aerate the blood. Life depends upon two systems; the cerebral or nervous, and the organic, or functional activity of special organs; action may cease in either the one or the other for a limited period, and life be revived, but action ceasing in both, is not restored. "While capillary circulation continues, even if the heart no longer beats, ganglionic death has not taken place, and there is a possibility of the organic life reacting upon the suspended cerebral life and restoring it."*

The circulation depends in part upon the heart acting both as a force and suction-pump, and in part upon the walls of the arteries and capillaries, so that the arteries are slowly emptied, even if the beats of the heart cease. The ancients, finding that the arteries after death were empty, believed their function was to carry air through the body, and gave to the trachea, which they thought was the external opening of the arteries, and to the arterial blood-vessels, their name of "the receptacles of air":—with an almost inspired ignorance foreshadowing Harvey's discovery, but giving an application wide of the truth.

Fainting is suspended animation, often with little change in the circulation.

Sleep is suspended animation, and after severe exhaustion simulates death, and sometimes imperceptibly becomes death. How common the comparison—

"How wonderful is Death,
Death and his brother, *sleep!*"

Cardinal Wolsey longed "to *sleep* in dull cold marble." Continued sleep is the synonym of death. "He giveth his beloved *sleep.*" Macduff cries out,

* M. Brachat, *Medico-chirurgical Review*, Vol. V, Page 280.

“Shake off this downy *sleep*, death’s counterfeit,
And look on death itself!”

Remorsefully laments Macbeth—

“Duncan is in his grave;
After life’s fitful fever he *sleeps* well.”

Lethargy, catalepsy, a certain state of the drowning hypnotism or Braidism, all temporary conditions are examples of suspended animation.

Paralysis is a living death. Nutrition, circulation, and intelligence continue, in a more or less modified action, but voluntary muscles no longer obey the will.

Anaesthesia, apoplexia, narcotism from opium or other drugs, are instances of suspended animation. This condition can have no better description than that given by Friar Laurence:

“This distilled liquor drink thou off:—
When, presently, through all thy veins shall run
A cold and drowsy humor; for no pulse
Shall keep his native progress, but sureease:
No warmth, no breath, shall testify thou livest;
The roses in thy lips and cheeks shall fade
To paly ashes; thy eyes’ windows fall;
Each part, depriv’d of supple government,
Shall stiff, and stark and cold, appear like death;
And in this borrow’d likeness of shrunk death
Thou shalt continue two and forty hours,
And then awake as from a pleasant sleep.”

That there are physical conditions, when apparent death deceives the bystanders, and eludes partial investigation, is evident from many acknowledged cases. The story of the Indian Fakir, who survived a burial of as many days as Juliet was promised hours, whether true or false, has had very general acceptance. In January, 1880, in Ontario, Canada, a small-pox patient was supposed to have died, was encoffined, and after a short time was lowered into the the grave, but was aroused by the falling clods, cried out, was removed to the hospital and eventually recovered. In the *Popular Science Monthly*, January, 1880, a number of instances are recorded where people, thought to have been dead, have been resuscitated. Not alone in modern times do we hear of suspended animation: ancient writings have many references to their occurrence. The venerable Bede, of pious memory, reports a remarka-

ble case regarding "the master of a family in the district of the Northumbrians, who fell sick, and his distemper daily increasing, being brought to extremity, he died in the beginning of the night; but in the morning early he suddenly came to life again," etc.

The possibility of a state of suspended animation is acknowledged, proven, and established. Can such a condition be distinguished from death? The question is a vital, important, and individual one. It concerns communities, it concerns each person. If there is even a remote chance of premature burial, everyone has an individual interest, both as it relates to his own body, and, in a two-fold degree, as it concerns those near and dear to him. Believing in the occurrence, not to take exhaustive precautions to guard himself from such a dire calamity would be, in the individual, an act of negligence; not to preserve his wife and children, aye, and the community at large, from the danger of such a double death would be, in the citizen, a criminal omission.

Death may be defined as the distinctive cessation of all those functions, the aggregate of which constitute life, commonly preceded by painful symptoms, styled the "agony"; may be "natural," the result of disease or of old age; or "violent," the result of injuries; may be "molecular," limited to a part, or "somatic," affecting the whole body, and may begin at the heart, or the lung, or the brain, or the spinal-cord, or in the blood, although the latter is questionable. The ancients believed, as did Bichat, that death must commence in the heart, lungs, or brain, and poetically called these organs *Atria Mortis*—the Halls of Death. To a professional examination the preceding disease would disclose the probable manner of death. The paralysis of the sphincters, the variation of the temperature, the complete absence of respiratory murmur, and of the sounds of the heart, the action of the muscles, the softening of globular structures, hypostatic hyperaemia, and other post-mortem changes, are among the more objective signs of actual death, yet most of them require some time to develop their full value; but when they corroborate other more immediate tests, they establish the fact of death.

TESTS.

I. A bright concentrated light, sent through the normal hand of a living person, develops a more or less pronounced pink hue, but in a hand after death, a pallid, dusky, grayish white.

II. A mirror, or any polished metallic substance of a *low* temperature, will condense the vapor of the breath if air continues to be expired.

III. A ligature drawn around the finger tightly enough to compress the veins, but not the arteries, will cause congestion, swelling, and discoloration in the living but no change in the dead. For this test the French academy gave a handsome prize.

IV. Pricking a part, as the tongue or lips, abounding in capillaries, is followed by a droplet of blood, if the circulation continues, but will cause no flow if life has completely left the body. *M. Bouchut* before the French Institute, *Med. Chirurg. Review*, Vol. V, prize essay.

V. A bright steel needle inserted into the body, when life is present, very soon becomes more or less tarnished by oxydation; when, on the other hand, death has taken place, the needle, even at the end of half an hour or an hour, will retain its brightness. *Dr. Laborde* before the French Academy of Medicine. *British Med. Journal*, August, 1870.

VI. A drop of ammouia injected under the skin produces no effect, or next to none, if it be done in a dead body, but, if there be life, causes a bright red color to appear at place of insertion. *Dr. Monterverdi*, *New York Med. Journal*, February, 1875.

VII. Superficial application of hot iron may cause a blister to rise upon both dead and living bodies, but upon the dead the blister will be filled with air and be without surrounding redness, while upon the living it will be filled with serum, and circled with a broad band of reddened tissue.

VIII. Deep insertions of hot iron only char the flesh of the dead, but produce in the living the most active inflammation.

IX. Upon opening an artery uninjured by local changes and uncontaminated by general disease, if the blood flows in jets and is of a bright red color, animation remains; but, if it is patulous and empty, the life of that region has departed.

X. Coagulation of blood from a living body proceeds rapidly; from a dead body, very slowly or not at all.

XI. Generally the temperature of the dead body has uniform changes, gradually falling, from the particular degree which is diagnostic of the special sickness, to that of the surrounding atmosphere; the actual time required depending upon the clothing and other immediate influences. This, however, is a somewhat falla-

cious test and has many exceptions. In inalignant cholera, in cerebro-spinal meningitis, in small-pox, an increase of temperature, some time after death, has been noticed, occasionally limited to a particular locality. Dr. John Davy reports a case of rheumatism, where, at the post-mortem, "after the viscera had been exposed for nearly ten minutes, the mercury of the thermometer, placed under the left ventricle, rose to 113° ."

XII. About six hours after death cadaveric rigidity hardens the muscles and stiffens the joints, and after a variable period passes away. These conditions are subject to many variations as to time and degree. "The first stage, before the rigor mortis, limits the period of muscular irritability; the second stage, that of cadaveric rigidity; and the third, that of the commencement of chemical changes or putrefaction." "I believe it may be safely said that there has not been a single instance of resuscitation after rigidity has once commenced in a body."—Taylor's Jurisprudence, pages 64-70.

XIII. The effect of an application of electricity distinguishes a living from a dead body to this extent, that the muscles respond to the battery in inverse ratio to the time intervening after death; no response to a strong electrical shock is presumptive evidence of death. The convict, Takacs, in Raak, Hungary, April 14, 1880, is officially reported as having been resuscitated by the employment of the electro-galvanic current, after he had been pronounced dead and cut down from the gallows.

XIV The movements and murmur of respiration, and the impulse and sounds of the heart, are necessary for the maintenance of life; if entirely absent for any lengthened period, life ceases.

M. Bouchut, in the essay upon "Signs of Death," to which the French Institute decreed the Manni prize, wrote: "The absence of the sounds of the heart, listened for during more than one or two minutes, is an immediate and certain sign of death." The Commission to whom the essay was referred confirmed the value of this test, but, to overcome all objections, extended the trial to a space of time fifty times as long as the maximum of the interval (six or seven seconds) which one of their number had ascertained, from observation at the bedside of the dying, prevailed between the last pulsations of the heart. *Med. Chirurg. Review*, No. V, page 279. Notwithstanding the weight of this authority an exception to the rule is found in the case of a Col. Townshend, reported

by Dr. Cheyne. "He possessed the remarkable power of a seeming voluntary death; *i. e.*, of suspending the action of the heart and lungs for the period of half an hour." *Dr. Reese*, Taylor's Med. Jurisprudence, page 61.

XV. Many signs of true death are to be found in the eye. The film over the eyeball, the dullness of the cornea, and the collapse of the globe are usually evidences of death, although they may precede death in Asiatic cholera, or be delayed some time after death in apoplexy, or in poisoning from the inhalation of carbonic acid gas. The ophthalmoscope would recognize the different conditions of the anatomical structures of the interior of the eye which obtain in the dead and the living. Dr. Poncet, of Strasburgh, reports the application of this method: "W. N., aet. 40, the subject of chronic mania. Two hours before death he was very pale, with contracted and insensitive pupils, small, irregular, and intermittent pulse, with feeble, sighing, and infrequent respiration. The lower extremities were perfectly cold; he was unconscious. The pupils having been dilated with atropine, the following appearances were noted:

"Right eye: the optic disc is of a pale pink color, being slightly darker towards the temporal side; the veins are of medium size and contain dark blood; arteries small but fairly numerous; choroidal glow of a medium tint." (Left eye about the same as right eye.) "Again examined eight minutes after the last respiration. Right eye: the optic disc is of a papery white appearance, but near its center has a faint pink tinge. The lower veins are seen to pass over the disc and are uninterrupted in their course, but seem to spring from its edge. One or two arteries are seen proceeding over the surface of the disc, and the rest are well seen in their course through the retina. Left eye: the optic disc is very white, but has a narrow zone of grayish tint situated about equidistant from the edge and center of the disc. Only one vein can be seen to cross its surface, the rest seem to spring from its edge; in the remaining part of their course the veins are full of blood." The arteries are in much the same state as during life, only they are not visible on the disc, but become so at the edge. Six hours after death a third examination was made: the arteries were no longer visible; the veins remained full, but the choroidal glow was of a yellowish pink tint."

Another case was examined one hour after death, and in neither the right nor left eye were there any arteries to be seen.

“The stoppage of the heart’s action, and the consequent arrest of the circulation of the blood, led to striking changes in the fundus oculi, changes which are among the most unequivocal signs of death; as the heart’s action is failing, the arteries may be observed to diminish in size. A few minutes after death the capillary redness of the disc disappears, and its surface becomes of papery whiteness, in which, however, the central cup, if present, may appear of still more brilliant whiteness. The arteries quickly cease to be recognized upon the disc, appearing to commence upon its edge. The indistinctness of the arteries quickly extends, and in the course of half an hour, sometimes of ten minutes, are unrecognizable. These appearances persist until, generally after five or six hours, the progressive opacity of the media prevents further observation.”

The complete and permanent dilatation of the iris, if not consequent upon the exhibition of mydriatic drugs, or following brain or spinal injuries, is presumptive proof of death. Dr. Jessop of King’s College, London, who, relying upon this sign alone, restored a child that was pulseless, without respiration, and with fallen jaw, writes, “if a fully-dilated pupil be found in connection with the cessation of the respiration and the circulation, we may safely conclude that life is extinct.” Braithwaite, part 60, page 71. To one who watches critically the final actions of the dying, the sudden, sometimes almost lightning-like, dilatation of the pupil appears the most pronounced change that occurs. Some one of these enumerated tests may not, singly and separately, be conclusive proof; each one, however, is strengthened by the corroborative testimony of any other one, and, when confirmed by all the others, is sufficient to live by and die by, and, when intelligently applied, will prevent any premature burials.

If there is danger of premature burial: Firstly, physicians should, 1. Refuse to certify that all sudden deaths are caused by heart-disease or apoplexy, unless so proven by post-mortem examination or by other conclusive evidence. 2. Refuse to allow friends or officials to place upon ice any body in which death has not been conclusively recognized. 3. Refuse to give an opinion as to actual or apparent death, unless allowed to apply as many of these tests as they may think necessary.

Secondly, clients should be taught the foolishness of refusing post-mortem examinations, and should be made to understand that by so refusing they criminally gratify their own personal selfishness and deprive the victim, if any life remains, of the means of resuscitation; for a case has been reported where the first cut of the scalpel restored to consciousness a supposed corpse.

Thirdly, the community should recognize that it is an unscientific distribution of political power to elect or appoint anyone to the office of coroner who is not a medical man of good standing, and,

Fourthly, the state should change its present laws, under which the vagaries of "Crownor's quest-law" have been possible; a method which has long since been recognized as ill-adapted to its purposes, and which in practice is neither economical, wise, nor satisfactory; and in its place enact some ordinance by which the first official duties to the dead shall devolve upon properly-constituted medical inspectors. Such an ordinance, modeled after the Massachusetts law, has been drafted by our State Board of Health, and when presented next year, at Hartford, should be supported by the professional sentiment of Connecticut.

ESSAY.

A PROTEST AGAINST THE RECENT ACTION OF THE NEW YORK MEDICAL SOCIETY WITH REGARD TO CONSULTATIONS.

WILLIS J. BEACH, M.D., LITCHFIELD.

In view of the recent action of the New York Medical Society in relation to consultations with all legally-qualified practitioners, I make no apology for calling attention to the subject of Homeopathy, notwithstanding it has been so often termed a thread-bare theme. It seems to me to be a very grave mistake to in any sense endorse so palpable a delusion. I have carefully studied the arguments advanced in advocacy of this measure by the eminent gentlemen who had the matter in charge, and I confess that to my mind they are without weight. It has been charged that this action was taken at the instance of specialists and those who have a large consultation practice, and for their benefit, or in other words that it is a matter of the almighty dollar. I am unwilling to believe this, and yet the utter inexcusableness of the procedure very naturally leads some to believe it true. I make no excuse for confining my remarks to Homeopathy, for so far as I know it is admitted on all hands that the innovation was made in the interests of Homeopathy alone. Let us then very briefly inquire why this change has been made, or rather, what arguments are advanced in support of it. The avowed purpose of this new departure, so far as I can learn, is three-fold. "First, to meet and soothe the popular sentiment, which is adverse to the sentiment of the profession that we cannot professionally associate with men who hold or practice a medical dogma." Is this a good, a legitimate, or a sufficient argument in favor of associating with men who profess to practice an exclusive dogma? Are we as

scientific practitioners striving to do good, and good only to the people, to subordinate our opinions in this matter simply because the people cannot understand us, and call us bigoted, narrow-minded, or illiberal? Let us rather try and teach the masses the truth. Give them to understand that legitimate medicine confines itself to no one or more dogmas, but that it looks to the whole universe of mind and matter for its remedies; that it is in the best sense of the word eclectic; that the true physician does all and everything for his patient that will contribute to comfort or prolong life. It seems to me the people can be made to understand this much better than they could be made to comprehend how it would be possible that the consultations of representatives of regular practice with those who give infinitesimal doses could by any possibility be of service to the patient. The second purpose proposed to be attained is the extinction of Homeopathy and other exclusive dogmas by conciliation. In other words, we are to take homeopathy to our bosom, coddle it, and try and convert it from the error of its ways. The argument is that these men have hitherto been in the attitude of martyrs; that they have been sustained by the fact that we refuse them affiliation. The enemy, then, is to be embraced that he may be crushed; he is to be killed by kindness. Is this course likely to be efficacious? The moment we recognize these practitioners by meeting them as consultants, do we not on the contrary do for them just what they desire, to aid them in a continuance of the delusions which they practice? I think the proposed remedy would certainly prove valueless, and I also think it a very unmanly and degrading proposition. There is one remaining point for which it is claimed that such consultations may be advantageous to the patient, namely, "that by holding such consultations the educated physician may be able to point out to the uneducated man the actual nature of the patient's disease; and that although in so doing he cannot be permitted to suggest the remedy, his opinion will prove serviceable to the patient by enabling his physician to select more judiciously from his own limited arsenal of supplies." It seems to me this is, if possible, the most absurd of all the three arguments advanced. If your attending physician is to still treat his case with infinitesimal doses, and that is certainly what we are led to suppose from the language used, I would like to ask what possible difference it will make to that patient so far as treat-

ment is concerned by having had a regular consultant? Your consultant in such a case would have done no good whatever, but it seems to me would have lost a large percentage of his self-respect. I understand the claim is also made that the Homeopathic practitioner of to-day does not really differ much from the regulars, and that the difference is mainly in name. Is this true? and if true, does it help their case at all? I quote from a recent article in the *New York Medical Record*, by A. L. Carroll, M D., of New Brighton, as follows: "Even scant familiarity with the recent publications of the Homeopathic school will show that, as a school, it still adheres to the Hahnemannian dogmata, that the totality of the symptoms constitutes the disease, that such totality of symptoms is only to be cured by a drug capable of producing a similar totality of symptoms, and that the efficacy of the appropriate remedy is enhanced by its dynamization *ad infinitum*."

He also says "In a work bearing the imprint of 1882, and emanating from a Homeopathic College, I find gravely recorded the cure of a case of mania by one dose of the four-thousandth potency of belladonna, and am further informed that *lilium tigrinum* is the proper medicine for hysteria and uterine displacements, with much other similarly instructive matter." Again he says, "granted that there are among the miscalled Homeopaths some sensible men, who know and utilize the scientific advances in surgery and medicine, it is certain that the picture is not overdrawn as regards many, if not most, of the Homeopathic fraternity in this country; and it is equally certain that from this ultra Hahnemannian faction will arise the noisiest howl of jubilation over the quasi official surrender of the regular profession." In confirmation of this prediction allow me to call attention to the following resolution unanimously adopted at a recent meeting of the Homeopathic Medical Society, of Lancaster county, Penn. .

That it is the sense of this meeting, that since the practice of homeopathy has established for itself a honorable position in the estimation of the community, against all the opposing forces that the old school could bring to bear against it, there is no advantage or prestige to be derived by homeopathic physicians in consulting with *allopaths*, and therefore, the recent action of the Allopathic Medical Society of the State of New York, in resolving in future to consult with them, was entirely gratuitous.

Our encouragement then it seems for doing evil that good may

come is ridicule. I desire to be absolutely fair in the discussion of this matter, and with a view of showing that there are some homeopathic doctors who do not believe in the extreme theory as originally promulgated, I quote as follows from a recent editorial in the New York Homeopathic Medical Times:

“It appears to be evident that the high potency party have held sway too long. They represent a form of medical spiritualism which is unsound in theory and very prejudicial to the interests of true homeopathy. Notwithstanding this, they are holding prominent positions in all our medical colleges and societies, and at the same time are endorsing and advocating extravagant theories which are evidently subversive of the fundamental principles of homeopathy. They have held these positions so long that they have evidently come to the belief that they alone represent homeopathy, hence, by right, are privileged to dictate to the low-potency party regarding all matters involving homeopathic interests. They appear to be oblivious of, or at least ignore the fact, that this nondescript method of practice is repudiated by many of the best and wisest men in our school. They do not yet appear to comprehend the fact that the recognition and advocacy of the false theory of dynamization *must cease* because it is the embodiment of error, and from the homeopathic point of view, of error only.” I am sure it should be a source of gratification to us that even a minority are beginning to see the error of their ways, but is this a good and sufficient reason why we should go to them with the olive branch? If they have been confessedly wrong, should not they be the ones to make overtures? To a man who practices homeopathy because he thoroughly believes in it, and I doubt not there are many such, I entertain the same respect that I do for the man who honestly differs from me in matters of theology, notwithstanding I cannot for a moment comprehend how it is possible for a medically educated man to have such a faith; but to the man who pretends to practice homeopathy because in his particular locality the people demand it, and does not believe in it, nor practice it except in name, thus intentionally deceiving the people for the sake of gain, I have now and ever hope to entertain the most profound contempt.

We have tried to show that the arguments advanced in favor of this new departure are at best very feeble and wholly insuffi-

cient. Let us see if the reasons for refusing association with homeopaths are not as good, as sound, and as forcible at the present day as they have been heretofore, and let us in conclusion very briefly state what these reasons are. In the first place it is believed by the medical profession of to-day, just as fully as it was a half century ago, that homeopathy is a delusion ; that it has no scientific basis ; that it is utterly valueless, and that in practice it does harm, because it takes the place of rational medication. We do not ask that the code in reference to this matter be retained simply because it *has* been, as some of our opponents argue, but because we fully believe it is the only just course to pursue. We object to the professional association with homeopathic practitioners because we believe it can be no possible benefit to the patient, nor to true medical science. We make no quarrel with the homeopathic gentlemen themselves, but only take exception to their theory and practice as a matter of right, of justice, and of duty. If we do not believe in the system at all, I cannot understand how as conscientious men we can consistently be asked to in any way endorse it, and if we meet them in consultation we certainly do to a certain extent give them our sanction. Is it not true to-day, as heretofore, that a wide and unpassable chasm separates homeopathy from regular medicine ? Are not now as heretofore the two systems antagonistic ? Are they not also utterly irreconcilable ? If we are right, must not they of necessity be wrong ? Is there any half-way business about it ? Is it not either potent or valueless ? Believing it to be wrong, how is it possible for a man to countenance it or in any way endorse it ?

To the following clause of rules governing consultations also recently adopted by the New York State Medical Society, viz., "Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity," I do not think there is any serious objection ; I have not seen any, and providing this privilege is not abused, think it can do no harm, and am in favor of it. The action however in regard to general consultations with irregular practitioners, simply because they have legal sanction, is wrong from every point of view which I can bring to bear upon it.

Finally, to sum up the whole matter in a few words, we believe it is neither wise nor right to consult with homeopathic practitioners, chiefly because it cannot possibly do any good to any-

body. If we are right, they are certainly wrong, and we have no business to in any way give them aid or encouragement. Truth in the end will prevail, but oil and water will not mix, neither will scientific medicine and homeopathy. Let them go their way, and we will go ours, confident that in the end that which is true and right and just will prevail, and that which is false will fail. Instead of doing that which will tend to bolster up and perpetuate homeopathy, let us at all times, and under all circumstances, denounce the system as utterly worthless, and show by our actions with reference to it that we not only say it, but fully believe it, and that whatever others may do in reference to this matter, we, of the old commonwealth of Connecticut, will never under any circumstances be guilty of doing that which both our self-respect and conscience forbids.

ESSAY.

C. A. LINDSLEY, M.D., NEW HAVEN.

The subject proposed for consideration is embraced in the following:

RESOLVED, THAT IT IS DEMORALIZING TO THE MEDICAL PROFESSION, AND DETRIMENTAL TO THE PUBLIC WELFARE, TO PRESCRIBE PROPRIETARY MEDICINES FOR THE SICK.

In order to discuss the subject intelligently it is first necessary to define what is meant by proprietary medicines. Several terms and phrases are familiar to medical men and to the people as descriptive of medicines. Thus we have patent medicines, often called quack medicines, trade-mark medicines, copyright medicines, nostrums, also officinal medicines, and the prescriptions of physicians.

Proprietary medicines includes several of the above, and may be defined to be any medicines respecting which some person or persons possess an ownership, either of the method of preparation, or of some element in their composition which is secret, or else of some exclusive right to the manufacture or sale by which the medical profession is on the one hand kept in ignorance of their full qualities, or on the other deprived of such free and unlimited use of them as would be enjoyed from fair and honorable competition in their production.

There is still another and very dangerous class of medicines which are proprietary medicines in many respects as concerns this discussion, although they do not fall strictly within the limits of the above definition. I have reference to a practice widely prevailing among manufacturing chemists, of compounding in the form of elixirs, syrups, pills, etc., a host of different formulas, some of them of very complex nature and containing some of the most active and potent agents. These are prepared in great quantities, put up in packages adapted to the demands of the consumer, and for the most part, have only this apology for

their existence, that they save the prescriber the trouble of thinking, and relieve the druggist of the exercise of any special knowledge of his business. Examples are found in the many compound preparations of pepsine, bismuth, quinine, strychnine, arsenic, etc.

It is to be shown that the use of the above medicines is demoralizing to the medical profession and detrimental to the public welfare. It follows as a logical corollary that whatever is demoralizing to the medical profession is therefore hurtful to the public welfare, in so far as the well-being of the public is bound up in and dependent upon the well-being of a sound and judicious system of medical administration.

The practice of using proprietary medicines is detrimental to the public welfare, in that it tends to arrest and discourage the practice of scientific pharmacy, and so interfering with and preventing the best results which should flow from this valuable aid to public hygiene. It is detrimental to public welfare in that it affords an easy method of defrauding the sick, by obliging them to pay excessive and exorbitant charges for their medicines.

It is detrimental to the public welfare in that it obscures and obliterates the distinction between quack medicines and others, so that the public cannot see the line which divides them. It also prevents any just discrimination between quack doctors and those who prescribe these quasi-quack medicines. And so it destroys the confidence of the people in scientific medicine. It tends to endow quackery with some degree of respectability, but far more to degrade rational therapeutics to the level of bad empiricism.

It is demoralizing to the medical profession (and by that I understand the breaking up, disorganizing, and confusing the regular, orderly, and scientific work of the profession). It is demoralizing, I say, by giving public and unrestricted endorsement to the use of patent medicines.

It supplies to the retail druggist the strongest temptation, the greatest facilities, and the most logical excuse for prescribing for the ailments of his customers instead of sending them to a physician.

It is demoralizing to the profession because it is ruinous to scientific nomenclature, and renders a classification of medicines utterly impossible. What will the next generation of medical men know about Lactopeptine? Maltine? Vitalized-Hypophos-

phites? Celerena? Bromidia? Iodia? Petroleum Syrup? Soluble Phenyle? Malto-cocoa? Hydroleine? Listerine? Caulocorea? Viburnum Compound?* and a more innumerable host of mixtures? These are all of ephemeral existence, having no vitality other than what they derive from the advertising pages of medical journals and the newspapers. They are for the most part the inventions of tradesmen, and in no sense represent the growth and progress of medical science.

As the medical men of the present day are greatly ignorant of the therapeutics of Hippocrates and Dioscorides of ancient times, because we are not acquainted with the nomenclature of their medicines; so also the doctors of even the next generation, are likely to be ignorant of our therapeutics, for the same reason. For not only the names, but even the agents themselves, of our materia medica, as they appear in the advertising pages of our medical journals, are of the most fleeting and transitory character. We do not even pretend to any accurate knowledge of their composition, because their production is in great part a secret possession of those who traffic in them—but we do know that they are of the most kaleidoscopic nature, the creations for the most part of capitalists and money seeking corporations, and as liable to fluctuations and changes as the fancy stocks of Wall street.

What pretensions can physicians make to scientific practice whose therapeutics are based on such unstable foundations! The sources of the origin, and the growth in favor of these remedies, can in no wise be distinguished from the influences which gave origin and popularity to Jayne's Expectorant, and Hop Bitters, and Swain's Panacea, and liver pads, and soothing syrups. The practice is demoralizing to the profession, because the use of ready-made formulas is sure to lower the standard of professional intelligence, to diminish the accurate knowledge of materia medica, and the capacity of making nice therapeutic adaptations of remedies.

The encouragement of protected medicines is discouragement to the diffusion and general practice of scientific pharmacy.

The relations of the physician and pharmacist to each other in their services to the sick public are so close and direct, that it would seem quite obvious that they should have no antagonisms, and

*Note.—This list is all taken from the advertisements in one medical journal, but a multitude of other journals could have been cited with similar lists.

that their mutual interests would be best promoted by the most free, open, and confidential intercourse and harmony of action. There can be no question that it is an advantage to every practicing physician, as well as to the community, to have a reliable and competent pharmacist to prepare and supply medicines. So also it is an advantage to every pharmacist that the physicians to his patrons should be skillful and competent composers of prescriptions. They are each in a position to render useful aid to the other, and thereby the public are best served.

But what encouragement is there to pharmacists to become skillful and expert, if the physicians of their vicinity make no demand upon them for skill and knowledge?

Does not the pharmacist feel unjustly wronged when the physician so openly ignores the ability and attainments which he possesses and asks him to send to some distant city for preparations he could make as well, or better? What inducement is there to become a skilled pharmacist, when any errand-boy is competent to pass across the counter and take pay for the ready-made factory medicines that the physicians of his vicinity prefer?

What is a more natural consequence of such a relationship between physician and pharmacist, than that the latter should retaliate, and, ignoring the skill and knowledge of the physician, dispense these same factory-medicines to his customers without the prescription of the physician. And why should he hesitate to prescribe with confidence, when he can truthfully say to his patrons;—This is just what Dr. Pro, or Dr. Prie, or Dr. Tary would give you, if you should go to either of them. And his conscience would be quite easy in the belief that he derived his knowledge of these medicines from the same sources as the doctors—namely, the labels and wrappers of the packages which give full directions for use. And so, between the doctors and the druggists, the poor patients are badly abused, the science of medicine is brought into disrespect and contempt, and the more intelligent patient is justly suspicious that he is the victim of quackery.

All this makes a very serious view of the subject. The medical profession make great lamentation because the druggists defraud them of their fees by prescribing across the counter. But such complaints will never cease so long as we deprive the druggists of their just claims to the patronage of the community in which they

live, and at the same time afford them such easy and unparalleled facilities for assuming the duties which legitimately belong only to our profession.

The medical profession deliberately and without apology defraud the pharmacist of the exercise of his proper and legitimate functions, the making of pharmaceutical preparations; we degrade his vocation to the business of a storekeeper, we compel him to pay the profits which are justly his to other manufacturing pharmacists of distant cities, and so enhance the cost of medicines to our patients. Having in this way hindered the cultivation of pharmacy as a science, injured our local pharmacist in his business, and increased the cost to our patients, is it not astonishing that we are still so blind to the impropriety of the whole thing that we cannot see that in doing so we have also provided the most direct, effectual, and surest means of injuring ourselves, and even opened up another serious source of danger to the public.

I inquire if any one is ingenious enough to invent or devise a more successful plan for intercepting patients on their way to our offices than this very one: the providing at all the drug stores the medicines we use, in the most convenient packages, wrapped about with full printed instructions about the diseases they will cure and with all requisite directions as to dose and administration.

I doubt if any one will ever devise a process more suicidal to our professional interests or dangerous to the welfare of the sick public. There are scarcely any of the common ills of flesh that are not provided for by these shrewd manufacturing chemists, and our drug stores are stocked with remedies ready prepared for the cure of each. The druggist is just as familiar with their virtues as the physician; both get their knowledge from the same sources, viz., the wrappers and advertisements. If then one's wife is the victim of dysmenorrhœa why should he go to his physician, when his druggist can probably show him his own physician's published certificate to the virtues of Hayden's Viburnum Compound, for that trouble? If he is suffering from neuralgia, his druggist can show him whole pages in medical journals of the testimonials of medical professors that bromidia will cure neuralgia. If he has a cough or his children have the croup or diphtheria, still a doctor is not required, for some medical journal conspicuously advertises that "Petroleum Syrup is *absolutely a specific and a certain cure* for coughs, colds, croup, sore throat, diphtheria, and

all bronchial affections." Every ailment is met by the ready-made remedy, vouched for by the profession and found at the drug store. There really seems to be no need of physicians; the manufacturers have become the practitioners for the times. And they very liberally issue free of charge their little treatises on the Theory and practice of Medicine and on Therapeutics, from which the profession seem to derive so much information that they voluntarily aid the plan with their abundant certificates and testimonials to its merits.

It is no discredit to the members of the medical profession that they are not also expert pharmacists. The two pursuits are distinct, and yet the physician can without compromising his position hold frequent conferences with a skilled pharmacist, as to the compounding of medicines in cases exceptional, to the great advantage of his patients. It is infinitely less derogatory to his character, than writing for trade-mark formulas.

We cannot but be impressed with the magnitude of the injury to the public weal, when the knowledge of compounding medicines has become a lost art to the practicing physician. There is reason for a sense of deep humiliation, if we know so little of pharmacy, and have so little skill in adapting our remedies to the needs of our patients, that we are driven to seek what they require, among ready-made prescriptions, as we would fit ourselves to a cheap coat at a ready-made clothing shop. In this aspect of the question, it must impress every one that the use of protected formulas is detrimental to the public interest, and demoralizing to the profession. Again:

The general use of proprietary medicines, by the profession, is objectionable, because it opens a wider field and greater opportunities for deception and fraud than any other system that could possibly exist.

The adulteration of drugs and medicines has long been a notorious and undisputed fact. The facility with which it can be practiced and the difficulty of detection unite to make it one of the most successful fields for fraudulent operations known to the commercial world.

The more complex and mixed the preparations are, the more difficult it is to detect the cheat, and the greater the temptation to the manufacturer. Now whereas, the said manufacturers are not and never have been distinguished as preëminently superior to

other business men in righteousness and true holiness, and whereas their sole object in business is *gain*, I risk nothing whatever of overstating the fact when I assert that the profession have less assurance and the public less protection in regard to the quality and reliability of proprietary medicines as a kind of merchandise than of most other sorts of merchandise.

The opportunity and temptation to fraud is so open and constant, that poor human nature is no more capable of resistance in this special phase of the business than it has proved in other branches of the drug trade, in which fraud is so notoriously practised.

I need only mention as illustrations, cincho-quinine, and sweet quinine. Many other instances of similar frauds are sufficiently familiar.

Another source of unreliability is the frequent changes which the owners of these *nostrums* make in their preparations. We should keep in mind that their sole object in business is to manufacture an article which will *sell*. In their estimation its only value is the *commercial* value. Do not lose sight of a fact, which we all must recognize, that these manufacturers stand in a wholly different relation to the public from ours. They make medicines simply to sell. They hold the same relation to the public that manufacturers of clocks do, or of rubber shoes, perhaps I might even say manufacturers of bowie knives and pistols, who care not what execution they do. We use medicines to cure diseases. In the social scale, we stand upon a higher plane than they. While engaged in our professional duties, we are brought into the closest personal relations with the sick. Our responsibility, our success, our reputation, all depend upon the purity and integrity of the means we employ in aid of our skill, to relieve human suffering and preserve human life.

Pecuniary considerations are, for the time at least, disregarded in the anxieties of the hour. Manufacturing chemists feel no such responsibilities. The real consumer of their wares is far removed from them. They never meet him. They have no acquaintance with the sick chamber, with the anxious, heart-broken friends, and the beds of death, with which the doctor is so familiar. No, nothing of that disturbs the composure of their systematic business methods. Their only concern is to improve

the market demand for their manufactured wares—to conceal defects in them, and to exalt and magnify their merits.

It is a very prominent effort with most of them to make their compounds agreeable to the taste and pleasant to the sight. Superiority in these particulars gives an acknowledged advantage over competitors. Hence, constant endeavor to remove an unpleasant feature of taste, or appearance leads to frequent changes in the preparations, of which the physician gets no information.

It is not an improbable suspicion that the so-called improvement is often made at the expense of the merit of the medicine.

Now how do we know this? A chemical analysis is generally impracticable and always expensive, and only reliable for the particular specimen tested. Physiological and therapeutic tests require larger opportunities than the private practitioner enjoys. We know it on the evidence of these manufacturers themselves. We ought to receive that with confidence. They know more about the tricks of their own trade than we do, and they have a motive for telling the truth about each other. Almost every one of them in their advertisements intimate pretty broadly that the other manufacturers of the same product are not so trustworthy as themselves, that their own preparations are the only reliable ones in the market. One or two quotations are sufficient to indicate the kind of testimony I allude to

One of the largest establishments in New York, boasting of the products of its own factory, refers in these words to the productions of its rival competitors: "The unreliability of many of the granules of morphia, strychnia, corrosive sublimate, and other important poisonous substances, have been the source of much concern to physicians, and danger to their patients." Another firm says: "Please specify our preparations, as others of inferior quality are often substituted."

Doubtless they know each other better than we know them, I say—and remember the old adage—"it takes a rogue to catch a rogue." When they voluntarily expose each other, we ought to be wise enough to profit by the information the exposure affords us. Their own testimony goes to prove how unreliable the majority of the stuff is. Another evil of this practice, and one of no trivial importance, is the infinite number and variety of these ready-made preparations. Recently looking over the advertising circulars of a half-dozen manufacturers, I counted over two hun-

dred and fifty different elixirs of medicine, no two of which claim to be exactly alike, although the nostrums of different makers often bear the same title or label. There is probably no more popular preparation with the profession than the Elixir of Iron, Quinine, and Strychnine. Dozens of manufacturers have put the compound on the market, and the proportions in different specimens vary greatly, so that some contain four times as much strychnine as others, and yet so ignorant or careless are physicians that they most frequently write for it, without indicating whose preparation they wish for. The multitude of these manufactured compounds has become also a serious evil to druggists, for no one could keep a full line of every maker.

The vast majority of these preparations can be as well prepared by every apothecary who has any right to keep a drug store. For example, we have a host of simple and compound emulsions of cod liver oil. Gallons upon gallons of Emulsions are now standing spoiling, or spoiled already, upon the shelves of our drug stores. Much of these damaged preparations will yet be sold, when if the druggist had prepared them when wanted, they would be fresh and good, and not so likely to disgust the patient, and so prevent the use of a valuable remedy. The regular medical profession assumes to be the legitimate guardian of the public health, and prides itself in the belief that it is so regarded by the most intelligent and numerous portion of the same good public. Accordingly, in the code of medical ethics, which is generally acknowledged as the best exponent of the principles which should govern the profession, it is written that "it is the duty of physicians who are frequent witnesses of the enormities committed by quackery . . . to enlighten the public on these subjects," and that "physicians ought to use all the influence which they may possess . . . to discourage druggists and apothecaries from vending secret medicines, or from being in any way engaged in their manufacture and sale."

Our own State Medical Society has for more than a quarter of a century had this by-law on its books, to wit:

"That the several County Associations are hereby instructed to continue their investigations in relation to the manufacture, sale, recommendation, and use of nostrums or patent medicines by their members, and to present for trial any member so offending."

The whole spirit of these laws is in the interest of public

safety. It has been held as an undisputed law of right among all high-minded, honorable men in our profession from time immemorial, that no man can rightly hold for his personal advantage a secret remedy which will alleviate human suffering, or save human life. And the same principle is equally maintained in denying to any one the right to the exclusive possession and control of a valuable medicine, whether it be secret or not, in such way as to debar his fellow creatures from the benefits of it.

The terms used in the above by-laws are *secret medicines*, *nostrums*, and *patent medicines*.

It is a popular belief that *patent* medicines are secret, whereas the exact opposite is true—the very word *patent* signifies that it is not secret, from *pateo*, to open, expand, expose. There are very few medicines patented, for that reason, and because they are not patentable, as they cannot be proved to be new and useful inventions. Even physicians will often argue that they commit no offence, either against the letter or spirit of the law, when they use proprietary medicines, of which the manufacturer publishes the ingredients. The published formulæ are for the most part deceptive. *They are not working formulæ from which the article can be reproduced*, and the whole trend and bearing of the laws upon the subject, as well as the best sentiment and opinion of the profession is, that it is detrimental to the public welfare to encourage the manufacture and use of this class of medicines.

All the bad features of this practice are too many to consider within the limits of this paper; but there is yet one other phase of the subject, to which I beg leave to call your attention. The frequent prescribing of ready-made medicines, with such trustful and unquestioning confidence in their integrity and purity, begets and cultivates an unsuspecting easiness of belief, a credulous state of mind, that must astonish the manufacturing impostors in cincho-quinine, etc., almost as much as it pleases them. Like the heathen Chinese, they must occasionally smile with a smile that is childlike and bland, when they meet their dupes the doctors, so liberally prescribing their proprietary compounds.

One of the most remarkable illustrations of this credulity came to my personal knowledge within the past few weeks. The occurrence took place in a city which I will not name—I will not say it was in this state—nor would I like to put the odium upon the profession of any other state—and so I will not say where it was.

The story I will make as brief as possible. An intelligent gentleman, the victim of a chronic form of malaria, while in New York on business, was taken ill. He consulted Dr. Loomis, who prescribed a comp. tinct. quinine, to be had at Caswell, Massey & Co's—was greatly benefited—returning home told his neighbors—they told the doctors. Forthwith the doctors accepted it as a discovery in therapeutics, and daily wrote prescriptions for Loomis' comp. tr. of quinine, without knowing or enquiring for any more information about the medicine, than those words indicated. Without blushing at their inability to compose a similar formula, of which they would know the constituents, they required their druggists to send for the ready-made preparation to the N. Y. drug store. So great was the demand that several drug stores of the place were obliged to lay in a stock of Loomis' comp. tr. of quinine. I was credibly informed that nearly all the principal drug stores kept it. One apothecary assured me that he had sold as much as 30 pints a month. And yet, not one of these doctors knew anything more about the nature and constituents of the preparation than was to be learned from the label on the bottle, which the ex-malarial gentleman brought home with him.

Such credulity is phenomenal—such blind faith in the mystery of a compound is simply colossal. No body of intelligent gentlemen possess it naturally—it can only be attained unto by long cultivation—the steady habit of reading labels on bottles, and the studious perusal of certificates of cases.

What becomes of the scientific character of medical practice, if our guides in therapeutics are derived from such sources?

What could more shock the common sense of any intelligent community, and destroy their confidence in the practice of the *regular* profession, than the knowledge of such a fact as this.

The manufacturers of trade-mark nostrums have watched and encouraged and fostered this growth of credulity in the profession and have a much truer estimate of it than we have ourselves. It has grown and strengthened under their careful cultivation, until now they no longer hesitate to practice upon the members of the medical profession precisely the same artful methods which their more shameless brothers in quackery have practiced upon the common people.

Just as “Brandreth's Pills,” “Townsend's Sarsaparilla,” Hem-

bold's Buchu," "Kennedy's Discovery," and a host of other quack medicines have been forced upon the public by the liberal use of printer's ink spread upon tons of gaudy-colored paper, thrust in their faces at every turn, pushed into their doors, and plastered upon their walks,—exactly after the same methods the mails are loaded with the pamphlets and circulars and cards, in colors not one whit less gaudy, from the manufacturers of these protected remedies. They are addressed to the profession—carefully directed to the profession—the profession evidently has appreciated the flattering compliment contained in this appeal to its judgment, reiterated over and over again that these communications are intended only for the medical profession, not for the *Oi πολλοι*—the vulgar public.

Our medical journals, too, are stuffed with a rehash of the same in the form of advertisements. The certificates of their virtues in no respect less extravagant and boastful than those concerning "Kennedy's Discovery," or "Sherman's Lozenges," only a little, if any, more judicious and discriminating.

The following is clipped from a medical journal:

"PETROLEUM COMPOUND is a perfect emulsion of Petroleum Syrup and pure Cod Liver Oil combined with the Hypophosphites of Lime and Soda, is palatable and agreeable, and forms the most valuable and sure remedy for the certain cure of Consumption, Asthma, Bronchitis, Hay Fever, and all Chronic Lung Diseases.

PETROLEUM SYRUP is absolutely a specific and a certain cure for Coughs, Colds, Croup, Sore Throat, Diphtheria, and all Bronchial Affections.

We have hundreds of Testimonials from living persons, who have taken these remedies and now enjoy sound health.

CIRCULARS MAILED FREE. The name and address of persons who have taken and used these remedies will be cheerfully given."

That is the sort of stuff these manufacturers have the effrontery to address to the medical profession, and the *editor* and *proprietor* of a medical journal prints it, and asks his readers to consider his periodical devoted to medical science.

Here is another instance, scarcely less quackish than the above, and publicly endorsed by men apparently holding responsible positions as teachers of medicine. Yes, indeed, teachers! their titles seem to indicate that they are *teachers!* *Mirabile dictu!* teachers of medicine!! Heaven help their students, and their

future patients, if this is the sort of therapeutics taught in the colleges these professors represent.

BROMIDIA.

“BROMIDIA is the Hypnotic par excellence. It produces refreshing sleep, and is exceedingly valuable in Sleeplessness, Nervousness, Neuralgia, Headache, Convulsions, Colics, etc., and will relieve when opiates fail. Unlike preparations of opium, it does not lock up the secretions. In the restlessness and delirium of fevers, it is absolutely invaluable.

The following physicians, having tested BROMIDIA, recommend it to the profession:

J. K. Bauduy, A.M., LL.D., St. Louis, Mo.; Prof. Nervous and Mental Diseases, Missouri Medical College.

L. Ch. Boisliniere, M.D., LL.D., St. Louis; Prof. of Obstetrics and Diseases of Women, St. Louis Medical College.

Wm. B. Hazard, M.D., St. Louis, Mo.; Prof. of General Pathology and Mental and Nervous Diseases, St. Louis College of Physicians and Surgeons.

J. S. Jewell, A.M., M.D., Chicago, Ill.; Ed. Journal Mental and Nervous Disease, and Prof. Nervous and Mental Diseases, Chicago Medical College.

H. M. Lyman, A.M., M.D., Chicago, Ill.; Prof. Physiology and Diseases of the Nervous System, Rush Medical College.

D. R. Brower, M.D., Chicago, Ill.; Ed. Chicago Medical Journal and Examiner, and Prof. Nervous and Mental Diseases, etc., Women's Medical College.

I. N. Danforth, M.D., Chicago, Ill.; Prof. of Pathology and Diseases of the Kidneys, Woman's Hospital Medical College; President and Lecturer on Pathology, Spring Faculty, Rush Medical College.

D. D. Bramble, M.D., Cincinnati, O.; Dean; Prof. Principles and Practice of Surgery and Clinical Surgery, Cin. Col. of Medicine and Surgery.

Wm. Clendenin, M.D., Cincinnati, O.; Prof. Descriptive and Surg. Anatomy, Miami Medical College.

J. B. Marvin, M.D., Louisville, Ky.; Prof. Chemistry, etc., and Clinical Lecturer on Nervous Diseases, Hospital College of Medicine.

W. B. Fletcher, M.D., Indianapolis, Ind.; Prof. Physiology, Hygiene and Clinical Medicine, Medical College of Indiana.

W. J. Scott, M.D., Cleveland, O.; Prof. Principles and Practice of Medicine, Medical Department Wooster University.

H. H. Powell, M.D., Cleveland, O.; Prof. of Obstetrics and Diseases of Children, Cleveland Medical College.”

Then, too, our offices are daily beset with polite, well-dressed and

loquacious emissaries, coming laden with samples of their productions, which they beg us to test the merits of, upon our poor patients. How exactly like the way in which "pain-killers" and "all-healing ointments" are politely presented to the clerical profession, who in return readily publish certificates of the astonishing virtues they find in them.

Human credulity is about the same in all ranks and stations of life. But it is very humiliating to know that boastful pretensions, constantly, persistently, and boldly reasserted, should make dupes of doctors almost as easily as of their patients. This may seem very strong language. But I appeal to your own experience and knowledge of facts to tell me upon what other foundations rests the wide and general use of proprietary medicines, than the boastful advertisements in which they are wrapped. Tell me, if you can, which of the standard authorities in therapeutics advocates the use of these peculiar forms of the *materia medica*. Not any. I state it boldly, as my sincere convictions, that the extensive sale of proprietary medicines is secured through the prescriptions of medical men, by precisely the same system of persistent, boastful advertisements and certificates, applied to our profession, that secures the sale of Vegetable Liver Pills and Hop Bitters, and all such trash, to the general public. Where else do we learn of these things except through the advertisements?

One illustration will suffice to enforce the truth of this statement.

Scarcely any of the proprietary medicines have found more favor with our profession than the syrup of the hypophosphites of soda, lime, and potash. So extensively has it been prescribed, especially for tubercular diseases, that almost all the makers of ready-made medicinal compounds have found it profitable to engage in the manufacture and sale of this preparation.

It is now more than twenty years since Dr. J. F. Churchill announced to the Imperial Academy of Medicine at Paris that he had made a discovery of a specific cure for tuberculosis. His theory was, that the immediate cause, or an essential condition of the tubercular diathesis, is the lack of phosphorus in the system; and the specific remedy consists of a preparation of phosphorus which can be immediately absorbed or assimilated, and which is at the same time at the lowest degree of oxydation.

His report created, as well it might, a sensation in the medical

and scientific world. It was accompanied by a detailed statement of the use of the soluble salts of the hypophosphites of lime and soda in thirty-five cases, of which nine were cured, eleven were improved, fourteen died, and one was still under treatment.

The keen perception of shrewd business men was not at fault in seizing upon the time and the occasion to develop a field of enterprise which, under their skilled cultivation, has yielded them a bountiful harvest.

Observe the conditions. One of the most eminent centers of medical learning in the world receives the announcement that a specific cure for consumption has been discovered. The disease is among the most fatal that afflicts mankind. Throughout America, and in most parts of Europe, its victims outnumber those of any other malady. It is a chronic affection, lasting months and years, during which the patient seldom despairs of recovery, and is a faithful taker of medicines until death. What a magnificent opportunity for an enterprising business speculation. From statistics carefully studied, it was estimated that from eighty to a hundred millions of the inhabitants of the globe were annually carried off by some of the forms of this disease, and therefore should be legitimate customers for this newly-discovered cure. The opportunity was not neglected. Without delay the manufacture of the compound was undertaken by purely business men, as a purely business enterprise. They assumed at once the labor and cost of promulgating the discovery. It was announced, and is still, as the "most brilliant of the century." Announcements, circulars, certificates setting forth the wonderful properties of the hypophosphites began to be poured in upon the profession through every avenue of approach, and the shower has never ceased, or even abated. The following is a sample of the style: "The success attained in all the countries of Europe, as well as in the United States, has established the therapeutical value of the hypophosphites beyond all controversy, and has raised the discovery of Dr. Churchill above the mists of controversy and prejudice into the serene region of scientific truth."

By every device and art known to skilled advertising, the sale of this proprietary medicine has been promoted and maintained, and almost wholly through the agency of physicians' prescriptions. We have never been permitted to lose sight of this remedy for a day. It is obtruded upon our attention in every possible way,

and the results are just what the shrewd business men foresaw. They have used us to make a market for their merchandise. The medical profession prescribe the hypophosphites very largely, and, sad to say, their confidence in it is based almost absolutely upon the advertisements of those who traffic in them, and upon nothing else. I appeal again to your knowledge of facts to tell me what recognized authority in therapeutics recommends the use of these hypophosphites. I have examined all the recent authorities to which I have access, with the following results:

Wood & Bache, U. S. Dis., says: "The author does not wish to be understood as recommending these remedies in consumption. The weight of testimony appears to be opposed to the first favorable impressions."

H. C. Wood, *Mater. Med. and Toxicol.*, does not mention any of them.

Prof. Bartholow gives the agent the honor of mention, but doubtless has reference not to the proprietary preparations, but to the Compound Syrup of the Hypophosphites of lime, soda, potash, and iron, for which a formula was published some years ago in the *Journal of Pharmacy*, by Prof. Proctor. He says it is an agreeable preparation, but not better in effect than the phosphates into which it passess by oxydation in the stomach.

Biddle says: "They have been introduced in the treatment of phthisis under an impression that they are useful by furnishing phosphorus to the tissues. They more probably act by stimulating cell-growth and nutrition."

The National Disp., Stille & Maische, says: "The evidence of the efficacy of these preparations, independently of other and more efficient medicines (iron and cod liver oil) and hygienic influences, is too slender to be seriously entertained." Again: "The hypophosphites have been used with alleged success in phthisis, but the allegations have been unsupported by the results of experience."

Ringer, whose authority in therapeutics is as often quoted as any, disposes of the whole subject in these words: "They have been extolled for their efficacy in some forms of phthisis, and have found more favor with American than with English practitioners."

Prof. Binz, of the University of Bonn, an eminent authority, makes no mention, but his editor, in the last American edition, uses this language: "Though largely prescribed in phthisis, the opinion

of the medical profession does not appear to be at all in favor of their possessing any specific influence over that disease."

Farquharson, one of the most recent and reliable of writers, and the author of a "Guide to Therapeutics," omits mention.

Dr. Cotton, at the London Hospital for Consumptives, writes at different dates as follows: In 1858, "Found it of no avail." 1861, "No specific action, and even when useful, inferior to other remedies." In 1868, "They are absolutely harmful by excluding more appropriate remedies."

M. Dechambre, in Paris, rendered a similar verdict.

Dr. Quain: "Comparatively, if not absolutely useless."

Dr. J. R. Beunett: "Of twenty cases, only nine in which the disease did not steadily advance while under treatment."

The above are eminent authorities, men whose judgment and opinions we are accustomed to regard with respect; many of them have made therapeutics a special study, and have investigated the powers of medicines by scientific methods, and have not drawn their conclusions solely from the varying opportunities of clinical observation. Now, when such men either omit all mention of these medicines, or speak disparagingly of their value, to what can we ascribe the enormous sale they have had through the influence of the profession, when put forth in the form of a "nostrum," except it be, the blind and trustful credulity with which the profession have received the exaggerated statements of their powers as set forth in the advertisements of their proprietors? What else, in fact, can we find to recommend these syrups of the hypophosphites beside the boastful proclamations of those who make and sell them?

Other illustrations might be presented if it were necessary, but I have already wearied your patience.

In what I have said, I have attempted to show that proprietary medicines are in a true sense nostrums. 2d. That their use by the profession is in direct violation of one of the long-established foundation-principles of medical ethics.

3d. That they are not reliable, either as to purity of constituents or uniformity of combination.

4th. That they are liable from time to time to differences unknown to the prescriber, from various causes, often in consequence of experimental changes by the manufacturer.

5th. That the frequent use of ready-made compounds tends to

lessen our knowledge of practical pharmacy and the practice of combining medicines skillfully; and to discourage skilled pharmacy among druggists.

And finally, that the constant and exclusive appeal to the members of our profession has so flattered their self-esteem that it has won their confidence, and physicians have gradually learned to put such implicit trust in the interested statements and assertions of the manufacturers of proprietary medicines as to lead them to ignore the study of better and more reliable authorities.

Gentlemen of the Connecticut Medical Society, if the views which I have presented are sustained by your observation and experience, it would be a reflection upon your intelligence to question your opinion, that it is detrimental to the public welfare, and demoralizing to the medical profession, to treat the sick by the aid of proprietary medicines. *Quod erat demonstrandum.*

ESSAY.

THOMAS'S OPERATION—LAPARO-ELYTROTOMY.

BY F. E. BECKWITH, M.D., NEW HAVEN.

PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN IN THE MEDICAL DEPARTMENT OF YALE COLLEGE; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE; ETC.

History of the operation. The ligation of the External Iliac Artery, by Abernethy and Astley Cooper, undoubtedly suggested to Ritgen a similar method of reaching the uterus without opening the peritoneum.

As practised by Ritgen, gastro-elytrotomy, as he named his procedure, consisted of four steps. First, an incision from the spine of the pubes to the anterior superior spinous process of the ilium, was made, through the abdominal walls; second, the peritoneum was lifted with the fingers until the utero-vaginal junction was reached; third, the vagina was cut through; fourth, the foetus was delivered through the opening thus made. He tried his new operation but left it uncompleted, on account of the profuse hemorrhage following the incision of the vagina, and substituted for it Cæsarean section. He never repeated his attempt after this failure in 1820.

Ritgen therefore first proposed gastro-elytrotomy to *avoid* opening the peritoneal cavity.

Joerg, in 1806, really foreshadowed Ritgen's operation by advising a modified Cæsarean section, without incising the uterus.

He advised opening the abdomen in the median line, and then, avoiding the uterus, incising the upper part of the vagina and extracting the foetus through the cervix. He did not perform his operation, which lacks the merit of Ritgen's, of not opening the peritoneum. Joerg therefore *proposed* gastro-elytrotomy with incision of the peritoneum.

In 1823, L. A. Baudeloque, ignorant of Ritgen's and Joerg's

efforts, advised an operation consisting of incision down to the peritoneum, along the outer edge of the rectus muscle, from the umbilicus, to a point two inches above the pubes; separation of the peritoneum from the iliac fossa, with the fingers working upwards from the pubes, and incision of the vagina four and one-half inches in length, then delivery of the foetus by forceps, or allowing expulsion to occur naturally.

He did not perform this operation, but modified it by adopting a flank incision down to the vagina.

In 1844 he published two cases, in the first of which he failed to complete the operation, but in the second he delivered a dead foetus, dead before he extracted it, however. The mother, who had uraemic eclampsia before the operation was begun, died four days afterwards.

Evidently, therefore, Baudelocque first, in an imperfect way it is true, performed gastro-elytrotomy.

In 1822 Dr. Physick also conceived the idea of performing Cæsarean section without opening the peritoneal cavity, and his suggestion is referred to by Dewees in his *System of Midwifery*, published in 1835.

In 1837 Charles Bell thought out a similar procedure. These suggestions and operations fell into oblivion, and would be unthought of to-day, had not Prof. T. Gaillard Thomas anew conceived the old ideas of Joerg and Ritgen, gradually evolved the operation from his mind and tried and finally perfected it upon the cadaver—fortunately once upon a woman dead at term—and finally performed it upon a woman moribund with pneumonia, in the seventh month of utero-gestation, to save the child. Without great difficulty or danger to the mother he delivered the foetus alive, and thus proved to himself that his operation was both possible and conservative.

This is only one of many instances of the genius of this learned obstetrician and gynæcologist. I quote his words: "The complete oblivion into which it fell will be appreciated when I assert that, until some time after I had essayed it on the cadaver, I was fully under the impression that the idea had originated with myself, and although I spoke of it freely with my professional friends in New York, none of them were able to correct my error, until I mentioned it to Dr. Emil Noeggerath, who remembered having somewhere read of Ritgen's operation."

The history of the old operations of Joerg, Ritgen, and Baudelocque is now complete in the learned essay of Dr. H. J. Garrigues, published in 1878.

In 1877, Dr. Thomas had the satisfaction of repeating his operation, saving both mother and child. He now changed its name to Laparo-elytrotomy, but it is fast assuming its correct title, Thomas's Operation, by which it will undoubtedly be known in the future.

In 1874 Prof. A. I. C. Skene, of Brooklyn, operated upon a woman exhausted from shock and efforts to deliver by eraniotomy, whose condition was hopeless in fact, resulting in her death seven hours afterwards. In this case Cæsarean section would have been as good an operation.

In 1875 Prof. Skene operated, saving both mother and child; and again in 1877 with a like brilliant result. These were both difficult cases, and reflect much credit upon this skillful surgeon.

In 1880, Dr. W. R. Gillette of New York operated, saving the mother, although the foetus, which was putrid, was delivered with great difficulty by the eephalotribe, after failure by forceps and version, attempted through the abdominal and vaginal incisions. The mother recovered easily.

Dr. Gillette says: "The presence of a dead, decomposing, and flaccid foetus in a uterus long drained of its waters, in a state of spastic rigidity, is a complication which will perhaps need the intervention of the forceps, cranioclast, or cephalotribe. This opinion is based on his one case only, and it is not probable that for the delivery of the normal sized foetus, even when flaccid, the latter two instruments will often be required.

In Great Britain, Dr. Himes of Sheffield, and Dr. Edis of London, have operated to save the children—both mothers being in a hopeless condition, and with success in both cases.

Mortality of the operation.

From this history we learn that in four moderately favorable cases four mothers and three children were saved, and that the fourth child was dead before the operation. Also that the four cases resulting in the mother's death were hopeless ones; that in these, three children were saved, and that the fourth child was dead before the operation.

Those statistics may be summed up as follows:

Operations upon Women not in a Hopeless Condition.

	No. of Cases.	RESULTS.			
		Saved.		Lost.	
		Mother.	Child.	Mother.	Child.
Thomas, - -	1	1	1	0	0
Skene, - -	2	2	2	0	0
Gillette, -	1	1	0	0	1
	-	-	-	-	-
	4	4	3	0	1

Operations upon Women in a Hopeless Condition.

	No. of Cases.	RESULTS.			
		Saved.		Lost.	
		Mother.	Child.	Mother.	Child.
Thomas,	1	0	1	1	0
Skene, -	1	0	0	1	1
Himes, -	1	0	1	1	0
Edis, -	1	0	1	1	0
	-	-	-	-	-
	4	0	3	4	1

In the total number of operations, eight, all the children, six in number, alive before the operation, were delivered alive. I quote from Dr. Thomas: "Can any one point to similar results from Cæsarean section? Can any one point to similar results for the mother herself, after that sacrificial operation, embryotomy, by which all the children are inevitably destroyed?"

Now, Perro's operation, modified Cæsarean section, has been performed, since 1876 up to June, 1881, seventy-one times, with thirty maternal recoveries and forty-one deaths; while Thomas's operation, since 1870, has been performed but eight times, although the death rate of the former has been 58 per cent. (antiseptically performed in many cases), and that of the latter nothing. Are we not justified in calling in question the wisdom of the choice, which has resulted in the loss of so many lives in Germany and (a smaller number) in this country? I believe that Perro's operation, and every form of Cæsarean section, ought not to be performed if Thomas's operation is possible. The choice lies always in the latter procedure, and in the near future to elect the former will, in my opinion, be considered as bad practice as to decide in favor of Cæsarean section over possible craniotomy.

To Prof. Thomas belongs the honor, since he not only thought out the operation, but also enthusiastically defended it and made it a success.

Its wonderful lack of mortality is not in any way, as far as we can judge, due to the merit of the operators, but to that of the operation itself. Hence it undoubtedly has a great future before it.

CONDITIONS IN WHICH IT IS INDICATED.

In all cases of pelvic deformity, from rachitis, osteo malacia, or any other cause by which the an. pos. or conjugate diameter of the inlet is reduced to two inches or less. It is true that by craniotomy, including cephalotripsy, delivery is *possible*, with partial safety to the mother, when the conjugate is only one and one-half inches, if there is a space of two and three-quarters inches in the transverse diameter ; provided, always, the operator is skillful. But I cannot consider craniotomy a safe operation when the conjugate is two inches or less ; in fact, it is now never otherwise than dangerous. That the ordinary operations of obstetrics are not free from risk, is acknowledged by every one ; but just how great the risk is, in private practice, has unfortunately not been established.

Jolly collected seventy-one cases of rupture of the uterus due to podalic version ; thirty-seven to forceps operations, and ten to cephalotripsy. (Selected obstetric works, p. 385.) The lamented Dr. Parry* has shown that, in the hands of the most skillful operators, craniotomy, with a conjugate diameter of two and one-half inches or less, has proved fatal in 37 per cent. ; while Cæsarean section, under favorable conditions, gives, according to Dr. Harris, a mortality percentage of only 37.5.† Therefore, may not the operation under consideration be justly considered an alternative to craniotomy as well as to Cæsarean section ?

Dr. Thomas has not so advised it, but would he not be justified in so doing ?

It is impossible to estimate how many women have died of traumatic and septic peritonitis following the ordinary operations of obstetrics, or else have made lingering and imperfect recoveries. It is unnecessary to dwell upon this fact familiar to all practitioners, and I will only refer to one of Dr. Skene's cases as an illus-

*Am. Jl. Obstetrics, vol. v., 1872.

†Dr. Harris. Am. Jl. Med. Science, Apr. 1878.

tration. In this, his second patient, recovery after *this* operation was *quick* and free from complications, while in her first delivery, at the age of 25 years (the conjugate diameter was two and three-quarter inches) by craniotomy, she made a very slow recovery, and was confined to her bed for six weeks; and in her second delivery, under Dr. Skene himself, version was performed with great difficulty, one month before full term, and metritis, with partial temporary paralysis of the limbs, followed, delaying her recovery for five weeks.

The relation of operations to pelvic contraction or obstruction should therefore be stated as follows: (Modified from Barnes.)

	Conj. Diam.	Operation.
First degree of contraction or obstruction,	4 to $3\frac{1}{4}$ in.	Forceps.
Second degree,	$3\frac{3}{4}$ to 3 in.	Version.
Third degree,	3 to 2 in.	

First, craniotomy or cephalotripsy; second, Thomas's operation, if the former is found to be extremely difficult.

Fourth degree, . . . Below 2 in. Thomas's operation.

My own conviction is that, with conjugate narrowing below two and one-half inches, the latter is a safer operation for the mother than craniotomy; and should be promptly resorted to in her interest only, if difficulty in delivery is met with by the cranioclast or cephalotribe.

If it is possible to determine, without a trial, that these operations will prove difficult, and therefore dangerous, Thomas's operation should be elected in preference.

"Dr. Skene's confidence in it for the mother will be appreciated from the fact, that his first operation was performed in her interest alone, after the perforation of the child's cranium by another practitioner." Dr. Gillette writes: "We can see no reason why it must not advance to a position and practice which will render sacrificial obstetric surgery one of the rarest of procedures." If we believe this, Cæsarean section and Perro's operation may wisely be discarded, except when, first, there is *obstruction in the cervix*, from cancer, from a fibroid interstitial growth, from extensive inflammatory exudations (perhaps, though very rarely), which render dilatation impossible by every means within our power; second,

when the upper two inches of the *vagina* are obstructed by a solid growth of a fibroid or cancerous nature, or by impassable atresia.

I quote Dr. Thomas: "It may be well for me to meet the question whether I regard it as proved that laparo-elytrotomy is superior in all cases as a resource practiced in the interest of the mother and child to the Cæsarean section, and in many cases, even for the mother, to embryulcia. I have given grave reflection to the subject." In reply to his self propounded question he modestly says: "I would say that I do not regard the claims of laparo-elytrotomy, to being established as a standard operation, as yet proved; but that I do regard it as now sufficiently tested by experiment to deserve careful consideration at the hands of the medical profession." In referring to alternative procedures for the future delivery of his second patient, he, however, speaks in a more certain vein: "He who, in the face of the evidence here presented (in his second patient), should resort to either of the two first-mentioned (embryotomy and Cæsarean section), throwing aside the last merely from prejudice or theory, would have strong faith in his own convictions, or else little regard for the results of experience. As for me, the readiness with which I urged a procedure which certainly saved one life, and in all probability saved two in her last delivery, would certainly be sharpened by the fortunate result in her case, and my increasing confidence in laparo-elytrotomy."

Dr. Garrigues writes as follows: "Gastro-elytrotomy ought, when possible (see contra-indications above), to be performed instead of Cæsarean section in all cases, and instead of operations by which the fœtus is broken up, when these would be particularly difficult, especially when the smallest diameter of the pelvis measures two and one half inches or less."

The REASONS FOR THE PERFORMANCE of each operation are given below:—

1. *Thomas's first case*.—End of seventh month of pregnancy. To save the child only. Mother moribund. Pelvis normal. Age 40. Multipara. Child extracted alive. Died in one hour.

2. *Skene's first case*—At term. To give mother, who was dying, a chance. Pelvis deformed, rachitic. Conjugate diameter of the inlet two and one-half inches. Primipara. The child's head had been perforated. Died in seven hours.

3. *Skene's second case*.—At term. To save the child primarily; two had been sacrificed. Pelvis deformed by rachitis. Conjugate di-

iameter two and three-quarter inches. Multipara. Age 31 years. Mother and child saved.

4. *Skene's third case.*—At term. To save mother chiefly, and child. Pelvis deformed. Conjugate diameter one and one half inches. Sacrum straight; symphysis pubis two inches deep. Anchylosis of both hip joints, the thighs being at right angles to the body. The knees could not be separated more than one and one-half inches. Primipara. Age 37. Mother and child saved.

5. *Thomas's second case.*—At term. To save mother and child, especially the former. Pelvis deformed. Conjugate of the inlet two and three-quarters or two and one-half inches. Transverse of the outlet two and one-quarter inches. One thigh was firmly ankylosed at right angles to the body. Primipara. Age 20. Mother and child saved.

6. *Gillette's case.*—At term. To save mother, child was putrid. Pelvis deformed by rachitis. Conjugate diameter of inlet one and one-half inches. She was only four feet four inches in height. Primipara. Age 23. Saved mother.

7. *Himes's case.*—At term. To save the child, mother hopeless with cancer of the vagina and rectum, with a fistulous communication between. Multipara. Saved the child.

8. *Edis's case.*—At term. To save child only. Pelvis deformed. Right hip ankylosed. Large thrombus in right labium. Multipara. Saved the child.

THE OPERATION.

First, the instruments required. These are a pocket case, needle holder, sponges, a silver male catheter, a large steel sound or bougie, Barnes's dilators, Paquelin's thermo-cautery or cautery irons. (Garrigues says ordinary table knives will do.)

Second, time to select for operating. The best time is towards the close of the first stage of labor, when the os externum has dilated to three or three and one-half inches. The fundus vagina is now dilated, as it always is "when the uterus is acting to expel any substance with pain."

Third. The bladder and rectum being emptied, the os should be dilated with Barnes's hydrostatic dilators, if not so, and the patient then etherized, and placed on a table upon her back, with shoulders elevated and legs extended.

If, later, the dilatation is found to have passed away, it can be quickly restored by the hand or the dilators applied through the abdominal wound. The antiseptic spray is not essential, and Listerism cannot be completely carried out.

Four assistants are useful, but not indispensable.

Fourth. The uterus should be drawn upwards and to the left, to make the skin and superficial fascia in the right inguinal and hypogastric regions tense. An *incision* should be made down to the peritoneum, which is separated from the transversalis fascia by loose arcolar tissue, sometimes containing fat. This incision should extend in the general direction of Poupart's ligament on the right side, and one inch above it (Dr. Skene thinks a little *higher*, perhaps one and one-half inches), from a point one inch above and to the right of the right spine of the pubes, to a point one inch above the anterior superior spinous process of the ilium.

If carried nearer the median line, the round ligament would be severed, as pointed out by Baudelocque in 1844; but this is not of much moment. In Prof. Thomas's case, in which it was hypertrophied, it was severed, but caused no hemorrhage; and later, on the twenty-fifth day after the operation, I ligated and removed the stump, which protruded into the wound. The external epigastric or superficial abdominal artery is always severed, and should be ligated or compressed with holding-forceps. Dr. Thomas merely compressed this vessel.

Dr. Skene, in every case, used compression only, by the holding-forceps, to the artery, and in no case did he twist or tie a single vessel.

Dr. Gillette twisted one vessel and ligated two, but met with no serious hemorrhage.

Garrigues recommends dividing the transversalis fascia upon a Key's hernia director.

The peritoneum should be lifted upon the finger-tips (the pulp) gradually, from the loose fascia, until the upper part of the vagina is reached. An assistant holds the peritoneum and intestines up out of the way, with a fine napkin laid upon them if necessary, to prevent slipping. The lifting up of the peritoneum is quite easy, by reason of the lax condition of the connective tissue during pregnancy, entirely different from the usual state.

I quote Thomas: "Having cut through the muscles, I rapidly

and easily lifted up the peritoneum with my fingers, and soon came in contact with the vagina at its junction with the cervix. The peritoneum is ample, and movable to a degree unknown in the non-pregnant subject."

Fifth. Another assistant now passes a silver male catheter or a sound into the bladder, and holds its tip one and one-half inches below the cervix uteri and against the posterior vesical wall to indicate where the bladder ends. This step of the operation is not an essential one—and was omitted by Thomas, Skene and Gillette.

Sixth. A large steel sound or a rectal bougie (or even a silver male catheter) is now introduced into the vagina, and made to push the right wall up into the incision—an easy procedure, for, in cases of pelvic distortion, which is the usual indication for this operation, the uterus is high, altogether above the brim, and the vagina, in consequence, is elongated, and always within reach from above. It is also large at its upper extremity, and thrown into longitudinal folds, which fit it for dilatation. Upon the guide in the vagina we now cut through the vaginal wall, with Paquelin's cautery knife, or a cautery iron heated to red heat. It is possible to incise the vagina without any instrument inserted into it as a guide, as did Dr. Thomas in his second case. After cutting through the muscles down to the peritoneum, and lifting this, and so reaching the vagina, "Professor McLane passed his finger through this canal (vagina), and pushing it upwards, I cut down upon it near the uterine junction." The incision should be one inch or one and one-half inches below the level of the os externum uteri, parallel to Poupert's ligament, or transverse in direction, and only large enough to admit the *tips* of two fingers. The sound or bougie should be removed, and with the two forefingers the vaginal incision should be slowly torn *forwards* as far as is safe, as indicated by the guide in the bladder, now held firmly by an assistant just below the right ureter; and then *backwards* as far as is possible. In this way a rent four inches long can be produced. Dr. Skene cut parallel to the ilio pectineal line just long enough to admit the fingers, and then tore the vagina by pulling upwards and downwards in the direction of its axis. In two of his cases he saw the rent which he thus made, and that its direction was *transverse*.

He found that the wall tore easily, and that the opening readily stretched to admit his hand. The incision is made so far below the os uteri because here there are fewer vessels than close to the uterus, and because the ureter will not be injured, nor Douglas's pouch be opened. The hand should then be pressed through to further enlarge the rent.

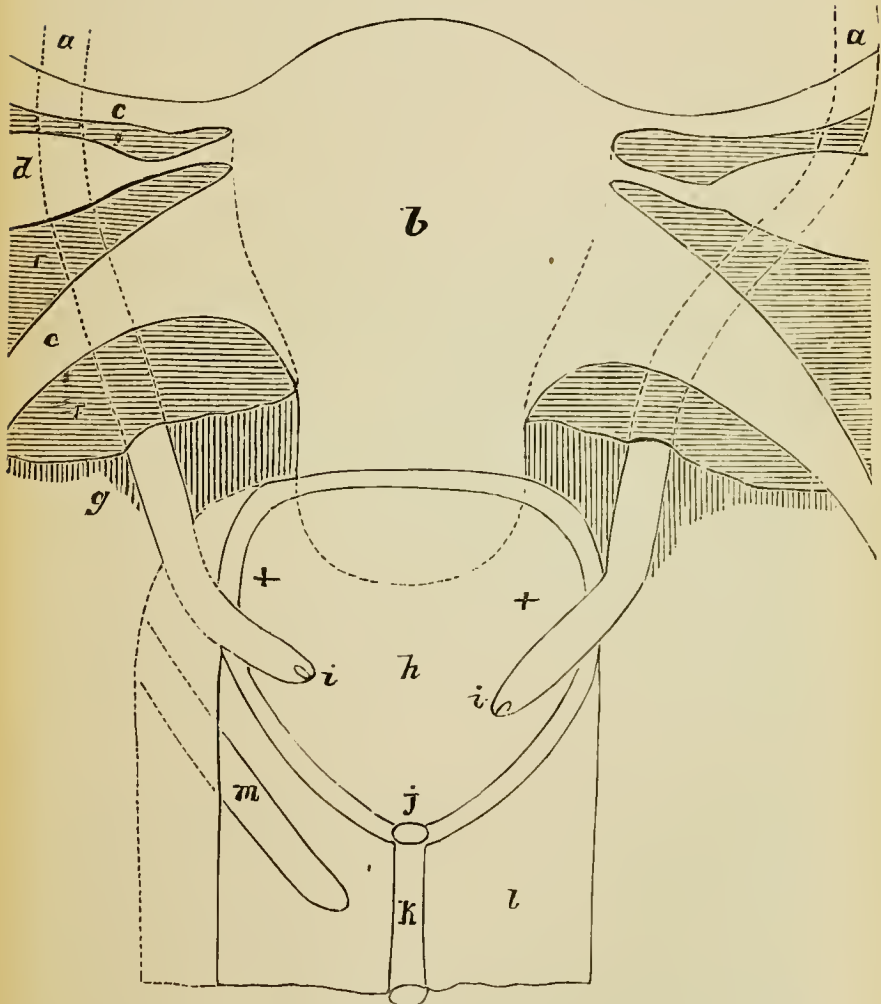


FIG. 1.—*a*, Ureters; *b*, uterus; *c*, Fallopian tube; *d*, ovary; *e*, round ligament; *f*, broad ligament; *g*, connective tissues; *h*, bladder (antero-superior part taken away to show attachments); *i*, vesical opening of ureter; *j*, inner aperture of urethra; *k*, urethra; *l*, vagina; *m*, incision and rent in gastro-elytrotomy.

Garrigue's Figure, to show the relative situation of the parts involved in this operation.

It is "theoretically constructed ; that is to say, I have made the diagram with the measurements taken on the body, putting them down on the paper without any consideration of foreshortening." In reality, therefore, the ureters are a little higher and further forward than indicated in the diagram, which is a most excellent one.

The guide is then withdrawn from the bladder.

Seventh. The uterus is now depressed downwards and to the left, and the *cervix* lifted into the incision by two fingers hooked into the os.

The child is delivered by forceps if the vertex presents, by version if the shoulder, and by simple traction if the breech. Thomas says : "By version, if the head or arm present ; by extraction, if the breech do so." The cord should at once be tied, and the infant given to an assistant. The placenta is to be delivered by the usual method, through the abdominal incision, and the third stage managed as in normal parturition.

Eighth. The bladder should be examined for a tear, and if one is found, it is to be closed at once by cat-gut sutures cut short and abandoned.

If inaccessible, it can be left unclosed, experience having shown that spontaneous repair is the rule.

The wound is then syringed with a solution of carbolic acid (13 to one pint), through the vagina and from above, and then closed by interrupted silver sutures (and strips of plaster). The vaginal wound is not closed. The incision should now be covered with a compress of cotton wool, held in place by broad bands of adhesive plaster and an abdominal binder.

A perforated drainage tube may be carried through the iliac incision into the vagina ; but while this may sometimes be good practice, it is not always so ; and that it is not, is proved by Skene's second case, in which the incision healed by first intention, except around two sutures. It may be considered necessary when the margins cannot be brought into accurate apposition, and also when the lips and deeper parts of the wound have been bruised by instrumental manipulations, as in Gillette's case, in relation to which he says :—

"I think I made a mistake in closing the wound originally, for

the purpose of getting union by adhesion. It would seem hardly to be looked for that such union could take place under the circumstances, as it is quite impossible to bring the walls of such a wound in coaptation by the methods at hand. Aside from this difficulty, it had been bathed and saturated by the decomposed fluids which had poured from the uterus at the moment of delivery of the fœtus and placenta.

“Much time, trouble, and danger would have been avoided if I had treated it as an open wound antiseptically, with a drainage tube passing through the wound into the vagina. The conditions of such a wound are most admirable for drainage, the opening in the vagina being at its most dependent point.”

If vaginal hemorrhage, produced by the tearing practiced, persists after delivery, it should be arrested by ligatures applied through the external wound. If this is impossible, a large speculum should be inserted to distend the vagina, and the edges of the iliac incision pulled far apart, and then the ligatures applied; or, if this is now impossible, the bleeding points should be touched with the solution of the subsulphate of iron. If this application does not arrest the hemorrhage, the actual cautery, or Paquelin's cautery, should be applied to the bleeding vessels.

A Sims speculum may be usefully employed to retract the upper overlapping lip of the wound while the applications are being made. If all these means fail, the vagina and iliac fossa should be tamponed with pledgets of cotton soaked in water and squeezed dry, and over all a broad strip of adhesive plaster holding in place a compress. In twelve hours the tampons should be removed, and the external incision closed as recommended when no hemorrhage exists. In all the operations so far, vaginal hemorrhage has given no trouble.

TIME REQUIRED FOR THE OPERATION.

Dr. Thomas performed his last one in thirty-four minutes. Dr. Skene his first in ten minutes; his second in fifteen minutes; “extra time was required in this case, owing to slight hemorrhage, caused by making the incision in the abdominal wall lower down than was necessary; and also by having to restore the prolapsed arm, and deliver by version.”

Ninth, after treatment. The vagina should be syringed *gently* every four or five hours, with carbolyzed water, the pipe being carried well up into the vaginal rent.

Unless the patient can pass water without any effort, the catheter should be used every six hours until such time as she can. As routine practice, it is best to use the catheter for five or six days. If the bladder is torn, an elastic male catheter or Sims's sigmoid instrument should be kept in it until the rent closes. In Prof. Thomas's second case, I used a sigmoid instrument for twenty days, when the bladder was found to be entirely healed. If the wound becomes painful, and prompt union fails, or if there is marked tension on the sutures, all of them should be removed, and the incision left to gape, generally an inch or an inch and a half, supported by strips of adhesive plaster.

If such a procedure is found to be necessary, the wound must thereafter be syringed every two hours with carbolized water, and then dressed with pledgets of lint soaked in balsam of peru (or carbolized oil, if preferred). Treated thus, closure by granulation will take place, both of the iliac and vaginal wounds, by the fourteenth day, in most cases.

In Dr. Skene's second case, the abdominal and vaginal wounds were completely healed on the fourteenth day. On the fifteenth day the patient sat up in a chair, and on the twenty-first went out riding. In Dr. Thomas's second case, on the twenty-fifth day after the operation I made a careful vaginal examination, and found an opening with a sharp falciform edge below, extending one inch towards the right iliac fossa. The external wound was at this time only two and one-half inches long. But in this case the healing process was delayed. (See history below.)

In all other respects the after-treatment is the same as that of craniotomy. Extreme quiet, comfortable warmth, and clean linen are essential. Opium and stimulants only when *required*.

I believe it to be bad practice to give a dose of opium or morphia to prevent pain, for by so doing we favor the occurrence of flatulence, which is one of the complications to be expected.

In most cases the after-treatment will not be different, but that it may be so is illustrated by Dr. Skene's third case and Dr. Thomas's second.

I quote from Dr. Skene's notes of his case: "Laparo-elytrotomy; operation four days after beginning of labor."*

"She recovered from the anæsthetic promptly, and showed no symptoms of shock, nor did she complain of pain or discomfort. On the day

*Am. Jl. Obstetrics, Vol X, No. IV, Oct., 1877.

following her pulse had fallen from $102\frac{1}{2}$ (where it was at the time she was delivered) to 100. The catheter was used frequently in order to keep the bladder from being fully distended.

(In this case it was injured.)

“The introitus vaginae was small and firmly contracted, which prevented free drainage, causing the urine to accumulate in the vagina, and well up through the abdominal wound.

“A rubber tube, perforated with small holes for about two inches at one end, was introduced into the vagina for the purpose of draining off the urine. It answered well, and for twenty-four hours the urine flowed continuously and freely into a urinal, and all appeared to progress well for a time. The patient unfortunately was ignorant, obstinate and unmanageable. Her mental obliquities and angularities were, like those of her body, well marked. After a day or two she became dissatisfied with the drainage tube, and would not let it remain any longer in the vagina. Every time that the doctor placed it there she would withdraw it and throw it away, and no argument could persuade her to do otherwise. The urine, from this time, flowed freely from the abdominal wound, and occasionally from the vagina. Owing to the disagreeable disposition of the patient, it was impossible to keep her clean or comfortable. Her appetite was good, her bowels moved regularly, she slept well on small doses of morphine at bed-time, and her pulse and temperature were normal, but it was difficult to keep her wounds in good condition. She was cared for by her sister, who, although willing, was not skilled as a nurse, and, besides, she had her household duties to perform.

“Such being her surroundings, we concluded to send her to the hospital, and on the fifth of July, two weeks after delivery, she was taken there. She made the journey to the hospital, about three miles, very comfortably. When admitted, her condition gave evidence of want of proper nursing. The wound was healed except at the outer portion near the anterior superior spinous process of the ilium, where the fistulous opening was. Around the opening the parts were foul and covered with a superficial slough. Most of the urine escaped from this opening. There was also a free purulent discharge.

“She was placed upon tonic doses of quinine, and a little morphine at bed-time to relieve an uneasy restlessness. The wound, vagina and bladder were kept thoroughly clean by the frequent use of carbolic acid and water. A stream was passed from the wound in the side through the vagina, and then reversed. The bladder was also injected; the stream being carried in through the urethra, and made to escape through the vagina and abdominal opening.

“To keep the wound in the best condition for healing, a rubber tube was introduced into the fistulous opening in the side, and it made good drainage when the patient could be persuaded to keep it in place, but she often pulled it out. After a few days the house physician succeeded

in passing a perforated rubber tube from the abdominal opening out through the vagina, and left it there. This made perfect drainage. Sometimes the urine would flow from one end of the tube, and sometimes from the other, according to the position taken by the patient, and she was unable to remove this tube, which was a great advantage.

“From this time the abdominal wound healed rapidly, and the drainage tube was finally removed about the third of August. The urine flowed then from the vagina only. To drain the vagina, a hard rubber bulb with a stem was used, which answered very well to carry off the water. The bulb was olive-shaped, and perforated closely with small holes. To the stem of the bulb a small flexible tube was attached, which conveyed the urine to a vessel. A rubber urinal was obtained for her, which she could wear while walking around, but for some reason, which no one could understand, she would not use it.

“Most of the time since the operation the bladder has retained more or less urine, and at this stage of her progress the house physician noticed that it began to retain more and more, showing that the fistulous opening was closing. Improvement in this direction continued until the 12th of August, when the bladder had fully regained its power of retention, indicating that the fistula had closed.

“At this date (August 12th) her health is as good as it ever was. In short, the recovery of the mother is complete, and the baby, which was left at home, prospered for a time, but died when eighteen days old, from bad feeding and lack of care.

“The notes here given of the ease while in the hospital are brief extracts taken from the clinical records kept by the resident physician, Dr. McPharlin, to whose skill and constant care her complete recovery is largely due.

“In reviewing this case of laparo-elytrotomy, I may say that a more unfavorable case for operating could not well be imagined.

“The conditions of the patient in every particular relating to the operation, and the want of facilities for after-treatment, were such as to thoroughly test the merits of this method of delivery. Certainly, greater difficulties than were here encountered are not likely to occur in the future history of this operation.”

Thomas's second case. (*Am. Jl. Obstetrics*, Vol. XI, No. II, April, 1878.) “From this time (end of the operation) the history is compiled from Dr. Beckwith's notes.”

Dec. 4th.—Patient slept well last night, quieted by morphia administered hypodermically. At 8 A. M.—T. 99°. P. 132. Milk given every two hours.

7 P. M.—T. 102°. P. 140.

Dec. 5th.—8 A. M.—T. 99½°. P. 124.

7 P. M.—T. 100°. P. 128.

Urine does not pass through catheter kept in bladder, but escapes per vaginam. A fistula evidently exists.

Dec. 6th.—9 A. M.—T. 101° . P. 136. Wound washed out by vaginal injection of carbolized water every 8 hours; water forced out through abdominal wound freely. 10 P. M.—T. $101\frac{2}{5}^{\circ}$. P. 128.

Dec. 7th.—8 A. M.—T. $102\frac{2}{5}^{\circ}$. P. 128.

7 P. M.—T. $98\frac{2}{5}^{\circ}$. P. 116.

Dec. 8th (sixth day since operation).—8 A. M.—T. $98\frac{2}{5}^{\circ}$. P. 108. Urine flowing now freely through catheter. When vagina is injected, very little water flows through wound. 11 P. M.—T. $100\frac{2}{5}^{\circ}$. P. 116.

Dec. 9th.—8 A. M.—T. $98\frac{2}{5}^{\circ}$. P. 124.

8.30 P. M.—T. 101° . P. 124.

Dec. 10th.—8 A. M.—T. $99\frac{2}{5}^{\circ}$. P. not recorded.

9 P. M.—T. $98\frac{2}{5}^{\circ}$. P. not recorded.

Dec. 11th.—9 A. M.—T. 103° , and at 10 A. M. $104\frac{2}{5}^{\circ}$. As patient had lived in a very malarious district, rise of temperature was regarded as due to miasmatic poisoning. Quinine was given in scruple dose, and at 7 P. M. T. was 100° .

Dec. 12th.—9 A. M.—T. $101\frac{1}{5}^{\circ}$. P. 124.

8 P. M.—T. $103\frac{1}{5}^{\circ}$. P. 128.

Dec. 13th.—8 A. M.—T. $101\frac{2}{5}^{\circ}$. P. 112.

8 P. M.—T. $98\frac{2}{5}^{\circ}$.

Dec. 14th.—8.30 A. M.—T. $98\frac{2}{5}^{\circ}$. P. 92.

7.30 P. M.—T. $98\frac{2}{5}^{\circ}$. P. 88.

Patient very steadily and certainly improving. Dec. 15th, T. taken every two hours, $98\frac{2}{5}^{\circ}$, P. from 92 to 104.

From this time the patient went on steadily to complete recovery, the wound healing by second intention, the solution of continuity being filled up by granulations.

It is in my mind a question whether the rise of temperature was due to miasmatic poisoning, or to septicæmia. My impression is that the former condition produced it, as it was markedly controlled by quinine, freely administered.

On the twentieth day after the operation, the bladder, which was undoubtedly injured, recovered its retentive power, the catheter was removed, and the patient thenceforth passed her urine voluntarily.

On the twenty-fifth day after the operation, one end of the ligament protruded from the wound, which had now nearly healed throughout its length. This was ligated and cut off.

On Jan. 3d, thirty-two days after operation, the wound, which was originally five inches long, measured in length two and a half inches, and in depth half an inch. Vaginal examination showed on right side an opening with sharp, falciform border extending into iliac fossa, one inch in extent.

EASE OF THE OPERATION.

That the operation is not difficult is illustrated by the description of every case. It is never difficult to dissect up the peritoneum, as already referred to. Dr. Skene says it separated as easy as a rabbit is skinned. In his first case he extracted the child and placenta with ease in ten minutes.

In all cases the operation has been of short duration. Dr. Thomas says, concerning the delivery in his second case: "Immediately the uterus, contracting strongly, forced the breech of the child into the iliac fossa, and, hooking the index fingers into the groins, I rapidly delivered." The vaginal rents have not bled dangerously, and the vesical tears, except in one of Dr. Skene's cases, have healed spontaneously.

The original opening is easily torn, until it is four inches in length, and can then be stretched to pass the cranium without difficulty.

In fact, delivery through the rent is less difficult, either by forceps, version, or extraction, than per vias naturales.

The operation, therefore, does not demand rare skill in the operator. "The operation which I am advocating is by no means difficult of performance. It may be accomplished with rapidity and certainty by any operator of ordinary skill."—Thomas.

DIFFICULTY AND DANGER OF THE OPERATION.

It is not yet known whether this operation can be repeated in the same patient, on the same side. Garrigues says it cannot be, because the peritoneum could not be again lifted up; but this statement is not founded upon clinical observation, and, indeed, is contradicted by Skene's third case. "But, on reaching the region of the peritoneum, I encountered the products of a previous inflammation, which obscured all the normal anatomy. I have always believed that a previous pelvic peritonitis would greatly complicate this operation, and have dreaded that such a case might fall to my lot; and in this case I fully realized my expectations. The peritoneum, iliac fascia, bladder, and vagina were all glued together by plastic material. There was danger of wounding the peritoneum. *There is no danger* of doing this when the parts are normal, for then the peritoneum can be easily recognized and lifted up from the other tissues with perfect facility; but in this case

everything was changed in appearance and character, and in place of easy-sliding tissues, we had lymph and adhesions, both difficult to manage. We succeeded in avoiding the peritoneum." It has been thought that the rectum would interfere with the operation upon the left side. Budin and Thévenot have proved that it would not, and thus settled this question. They operated on the cadaver at term on the left side, extracting a full-sized child, and injured neither the bladder nor rectum. It is unknown whether it can be done or not with extreme deformity and pendulous abdomen, because the site of the incision would be low and difficult of access; also if one or both thighs are anchylosed at right angles to the trunk, and the abdomen somewhat pendulous. Probably it can be accomplished in all such cases, since, under an *anæsthetic*, the abdominal wall and the uterus can be drawn well upwards and to the left.

In Thomas's case the uterus was inclined far forwards, and the left thigh anchylosed at right angles to the body, and yet the incision in the flank was easily made, and delivery was accomplished without difficulty.

In Dr. Skene's case, "to reach the point for incision parallel to and a little above Poupart's ligament, it was necessary to raise up the abdomen, and retract the soft parts of the thigh as much as possible." He succeeded in this case, however, and it is improbable that one presenting greater difficulties, from these two conditions, will ever be met with, as will be appreciated from the annexed two drawings of his patient.

"There was forward curvature of the spine in the lumbar region, a straight sacrum, a symphysis pubis two inches deep, and a conjugate diameter at the inlet of only one and a half inches. Moreover, both thighs were flexed to nearly a right angle to the body, and held there by ankylosis of the hip joints, and the knees could not be separated more than an inch and a half."*

The only immediate *dangers* are: First, vaginal hemorrhage; second, cellulitis and septicæmia; third, injury to the bladder.

VAGINAL HEMORRHAGE

has not proved a serious complication in the operations hitherto performed, and probably will not, if the thermo-cautery knife, or the actual cautery iron, be used to incise the vagina; and if subsequent enlargement is made by tearing and not by cutting.

* See Figs. 2 and 3, pp. 140 and 141.

In the words of Dr. Gillette "It is a very suggestive fact that, notwithstanding the recognized danger from hemorrhage, in the eight operations already performed (and in one done by Dr. J. T. Everett of Stirling, Ill., and reported in the October number of the *Am. Jl. of Obstetrics* for 1879, for the removal of a calcified fibroid of the uterus), so far there has been no such accident, and possibly future experience will eliminate the danger almost entirely."



FIG. 2.—Dr. Skene's 3d case—modified by adding uterus.

Unquestionably, however, this danger is to be apprehended, and, while in the cases reported it did not occur, "the future may belie the past in this regard." "I have looked for it with dread in my two operations," says Thomas, "as Skene did in his." We can control it, if it do occur, by the means recommended—ligatures, the actual cautery, the subsulphate of iron, and the tampon

—unless it be very violent. But why should it be so in the future?

CELLULITIS AND SEPTICÆMIA.

The cellulitis itself will not prove dangerous, and the only risk from it is septicæmia, and this is no greater than may occur from any incised wound, open to drainage and injection, unless the tissues are unusually bruised, as in Gillette's case. And yet in this case no septicæmia occurred. If septicæmia arise from lochial decomposition, as after natural delivery, it certainly is not due to the operation. True, it is a little more difficult to manage, because,

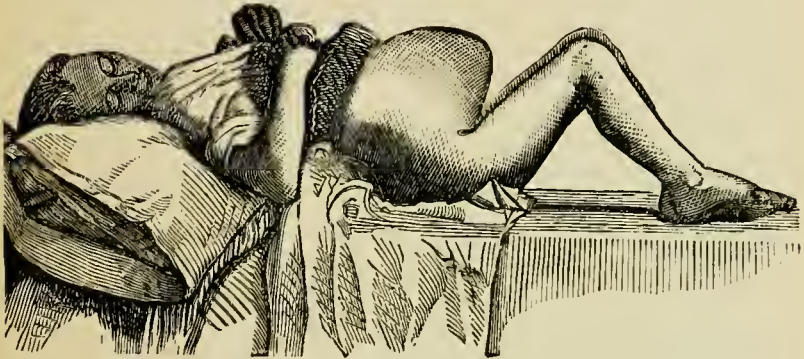


FIG. 3.—Dr. Skene's 3d case.

owing to the wound in the vagina, intra-uterine injections cause extreme pain, from the necessary vaginal manipulations. I found it impossible to administer them in Thomas's second case. Since grave septicæmia has not yet occurred, although some of the operations have been difficult, it is not to be dreaded in the future.

INJURY TO THE BLADDER.

The bladder has healed spontaneously in all, save one, of the cases in which it has been injured, but if it fails to, the resulting vesico-vaginal fistula can be subsequently closed without difficulty, as it was in Dr. Skene's second case, one month after delivery.

The injury may occur not only during the laceration by the fingers, but also during delivery. "I am satisfied (Dr. Skene in his second case) that the bladder was not wounded at the time when I opened the vagina, but that it occurred during delivery. If I had had more time, and could have permitted the parts to distend gradually, the wound in the bladder would not have been made.

It was unfortunate, if not bad management on my part, that I did not detect the wound in the bladder at the time of the operation, for then a few stitches could have been easily introduced, and the catheter used until the opening closed. When I became aware of the accident, I was unwilling to anæsthetize my patient again, and submit her to the operation of closing the wound, because I feared that I might cause hemorrhage. Finally, I wish to state positively that I believe the injury done to the bladder was the fault of the *operator*, not of the *operation*, and that I could avoid that accident in the future," provided the viscus be in its normal position. In his next case the bladder was injured also, but unavoidably so, since "the point at which the bladder was wounded was just opposite the anterior superior spinous process of the ilium, a place where one would not expect to find it."

The dangers of traumatic and septic peritonitis, metritis and septicæmia and shock, dangers always to be dreaded in Cæsarean section, are almost wholly eliminated, since neither the peritoneum nor the uterus is injured. The danger from shock is really nothing.

I have thus endeavored to show, not that Thomas's operation is a safe procedure, but that it has less dangers of a grave nature attending it than has Cæsarean section, and that, in this respect, it will compare favorably even with embryotomy and craniotomy.

This operation, which is truly conservative, has at last forced a recognition from obstetric authors, and in a few text-books has a chapter devoted to it; but it is not warmly recommended except by Playfair. Prof. Lusk, in his recent text-book, states that, "it is possible that the successes so far obtained have been largely due to the exceptional merits of the operators who have undertaken it," an opinion exactly the reverse of that of the operators themselves.

It is strange that this operation is still struggling for a place in practice; but perhaps no stranger than that slow recognition and adoption have been given to other great discoveries in obstetrics and gynæcology, to wit: anæsthesia in labor; Barnes's styptic iron solution and transfusion in post-partum hemorrhage; ovariectomy; Emmet's operation for laceration of the cervix; and Sims's for vesico vaginal fistula.

I have at some length asked your attention to this operation, and will not longer trespass upon your time, except to express the

hope, in closing my remarks, that, through your teaching and efforts, it will rapidly make its way into practice in this state.

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BIOGRAPHICAL SKETCHES

OF EMINENT MEMBERS OF THE MIDDLESEX COUNTY MEDICAL SOCIETY OF FIFTY YEARS AGO.*

BY RUFUS W. MATHEWSON, M. D., DURHAM.

One of the first members admitted was AUSTIN OLCOTT, of Killingworth, now Clinton, in 1796, then about twenty years of age. He was born in South Manchester, which was the birthplace of his father.

DR. GEORGE OLCOTT, who studied his profession with Dr. Porter of Wethersfield, where he spent his professional life, and died 1814, aged 62 years. It is said he was a surgeon in the army of the Revolution; at any rate, he gained the title of Surgeon Olcott in some way, by which he was known afterwards. He was a man of magnificent figure, of fine address, a great story-teller, and a beautiful penman. He belonged to one of the first families in the State.

With all these advantages, he gained the affections of a beautiful girl in his native place, who, while expecting to become the wife of Surgeon George, became the mother of Dr. Austin Olcott. He declined to marry the girl on the grounds that he had discovered too late that her style was not equal to the society in which he moved. He atoned for the sin so far as to treat her kindly, and make ample provisions for the support and education of the boy. All the splendid qualities of the father were transmitted to the son with wonderful perfection.

Dr. Austin Olcott married, in 1807, Elizabeth, daughter of the Rev. Achilles Mansfield, whose wife was a granddaughter of Dr. Jared Eliot. She died the next year; he remained a widower till 1835, when he married a Miss Wright, by whom he had two sons; one only is now living, Geo. A., who has served his third term in the Legislature from Clinton. His father was member of both houses of the Legislature for several terms; at one time, being the

* This includes members who died before obituaries were published by the Society.

senior member of the senate, he filled a vacancy in the office of Lieutenant Governor.

He excelled as a presiding officer, having a fine appearance and expression, and wherever placed was master of the situation. He was full of courage in the daytime, and as great a coward in the night; was very loth to respond to calls after retiring, always requiring a second or third rapping up before he made his appearance. He stood very high in his profession; his consultation practice in adjoining towns was very large; was quick as by an intuition to recognize disease, and very positive in his diagnosis.

The second case of tying the external iliac artery in this country was performed on a patient of his in 1820, by Nathan Smith. The diagnosis and subsequent treatment were by Dr. Olcott. The limb was œdematous at the time of the operation. The aneurism held eight ounces. The operation was perfectly successful, the patient living thirty-six years afterwards, enjoying perfect health.

Dr. Olcott had a very large practice for nearly half a century, the most of the time having no one but himself to support; had no bad habits, and died in destitute circumstances from a failure to keep his accounts and collect his bills. He always rode on horseback to visit his patients. He died in 1843, aged 68 years.

In the Olcott genealogy by Nathaniel Goodwin, Esq., of Hartford, in 1874, this branch of the family is left out rather than expose its crookedness.

THOMAS MINOR (Yale, '96), son of Rev. Thomas Minor, Westfield society, Middletown; born in 1777; studied medicine with Dr. John Osborn of Middletown; practiced in Lynn, Mass., and Lyme, Conn.; from there moved to Middletown, where he practiced many years; was president of the Connecticut Medical Society from 1834 to 1837. Died, 1841, in his sixty-fourth year.

HENRY WOODWARD, brother of Dr. S. B. and Charles Woodward, studied medicine with his father, and his brother, S. D., while he practiced in Wethersfield. He practiced his profession in Middletown, where he died of consumption in 1832, aged thirty-seven.

DR. ISAAC SMITH, son of Dea. Isaac Smith, of East Hampton. Studied medicine with Dr. Wm. B. Hall, of Middletown; practiced a few years in Killingworth, when he removed to Portland, where

he practiced till his death, a period of about forty years. He died in 1839, aged sixty-seven years.

For further account of the above three distinguished men, see Williams's Medical Biography, or Dr. Casey's Historical Sketches of Middletown.

DR. CHARLES SMITH, son of Col. Chester Smith, of North Stonington; studied medicine with Dr. E. B. Downing, of Preston City; commenced practice in East Hampton in 1823. Removed to Middle Haddam, where he died in 1848, aged forty-seven years.

ANDREW F. WARNER (Yale, 1812) and RICHARD WARNER, (Yale, 1817), sons of Selden Warner, of Hadlyme; studied medicine with Dr. Thomas Minor, of Middletown; attended lectures at Yale college, where Richard graduated in 1821. Andrew F. Warner practiced medicine in Haddam, and died while clerk of the Medical Society, in 1825. Dr. Hutchinson succeeded him, marrying his widow.

RICHARD WARNER practiced several years in his native place and adjoining towns. Married Mary M. Gilbert, of Mansfield, in 1826, sister of Dr. Gilbert, of Westbrook. She died in 1836, leaving a son, who resides in New Haven. He removed to Middletown, Upper Houses, in 1832. In 1844 he married Mary Gaylord, by whom he had two children. He died Oct., 1853, after a brief illness, about fifty-nine years of age. Drs. Harrison and Gilbert made an autopsy and found rupture of the gall-bladder. He succeeded his brother as clerk of County Medical Society, and was President of the Connecticut Medical Society at the time of his death. He had a large practice and was popular with his medical brethren. His power of observation was strong; was fond of botany and mineralogy; his name is mentioned several times in Silliman's Scientific Publications, as a discoverer of the localities of different minerals.

As a citizen he was first in every good work, a leading member of church and society, with strong convictions of right and wrong, standing firm for the right often to the sacrifice of his own interest. He was popular with the masses.

With the anti-slavery and temperance movements he was early and warmly engaged. One of the first to banish liquors from his sideboard, and to stand firm for total abstinence.

In 1829, during his clerkship, he ordered the decanters from the table at the annual dinner, where, on the motion of Dr. Woodward, it was resolved, That the thanks of this society be presented to the clerk for the compliment he has paid to our good sense and correct habits, by omitting ardent spirits in providing for our entertainment.

In improved agriculture he took a deep interest, carrying out many of the new ideas on his little place; was the first in town to "plant stones," as his neighbors called it, in under-draining. He was intensely interested in the early discovery of propagating fish, and so confident was he of its success, that he made application to Congress for the appointment of a committee to visit Europe to obtain such information as would be necessary to introduce fish-breeding in this country. He was greatly disappointed that it was considered in Congress not worthy of attention.

He was born at least a quarter of a century too early for his own comfort. He gained nothing but ridicule and the title of a visionary fanatic for pushing innovations which have since become established successes. He was prime mover in setting the town of Cromwell off from Middletown. He selected the name of the new town. He held successively all the offices of the church society and town. In the improvements of the village he was earnestly engaged, as many of the fine elms bear testimony. In the movement for an academy and a new church edifice, he was foremost and persistently successful.

The doctor was a sportsman and frequently carried his gun when going out of town; he at one time, while suffering from chronic rheumatism, saw a fox and dogs cross the road towards a river, which the fox crossed but the dogs broke through, and fearing the dogs would be lost he left his sleigh and broke the dogs out, falling in himself and getting a thorough wetting; he took the dogs in his sleigh and drove around by a bridge, put the dogs on the track and succeeded in killing the fox, after which on going home he found he had cured his rheumatism, and had no further trouble from it for the season.

RUFUS TURNER was born at Mansfield, Conn., September 1, 1790. With a good preliminary education, he entered the office of Dr. Joseph Palmer, of Ashford. and in 1813-14, attended the first course of lectures given at Yale College. With him were Dr.

A. L. Bissell, of Norwalk, a brother of Ex-Gov. Bissell, Dr. W. L. Lay, of Branford, and Dr. Jared P. Kirtland, with whom he was intimate—the friendship continuing through life.

That course of lectures, in 1813, was by Prof. Silliman, in Chemistry ; Dr. Knight, Anatomy and Physiology ; Dr. Eli Ives, Materia Medica and Therapeutics ; and Dr. Nathan Smith, Surgery Theory and Practice, and Obstetrics. I have the manuscript notes of these lectures taken by Dr. Turner, and after reading them over I can say with truth, "*there were giants in those days.*"

Dr. Turner was licensed by the State Medical Society in 1814, settled in Killingworth, married Sarah Mills Wooster, of Huntington, in 1819, who died in 1879, at the age of 87, leaving four sons and three daughters, whose ages range from 62 to 45.

Dr. Turner continued in the practice of his profession for thirty-seven years, until his death, after an illness of four days, in November, 1851. As a practitioner he was careful and conservative, but in cases where promptness was demanded, bold and fearless, faithful in attendance, giving freely of his time and thought to the case in hand, warding off unfavorable complications, and always striving to have the last blow at death. In the protracted fevers of those days he was particularly skillful, and was very frequently called to neighboring towns, in consultation. Dr. Reynold Webb once told me that he had rarely seen a better counsellor in acute diseases.

He was active in promoting educational interests, probably more so than any man in the town, and was careful to set the example of educating his own children well. He was early identified with the temperance cause, was active in all religious and philanthropic movements; and years before the anti-slavery agitation, confidently predicted that the day was coming when the country would be convulsed, and perhaps destroyed, by the antagonistic forces of the North and South.

Until his health was impaired by hard labor, he had an extensive practice. In those early days, his long daily rides over Killingworth, Haddam, Chester, Winthrop, Clinton, and North Madison were on horseback, in heat, cold, and storm; now ploughing through snow-drifts, again, with boots full of water, and clothing soaked with rain; it was only wonderful that he lived so long. He was a strong, healthy man in early life, with good appetite and good digestion, capable of performing a large

amount of labor, weighing two hundred pounds, always jolly and fond of his joke. But twenty years of service pulled him down. An attack of rheumatism confined him to his bed for months, and from that time he was a changed man.

For a series of years he had students of medicine in his office, among them, Dr. A. H. King, a graduate of Bowdoin College, in 1824, and Drs. Wm. Barker, Geo. W. Griswold, and David W. DeForest, of Yale.

He received the honorary degree of M.D. from the Medical Society and the Corporation of Yale College in 1830, and was for several years Fellow and member of the Standing Committee to nominate Professors in Yale College.

SAMUEL CARTER, M.D., son of Benjamin and Phebe (Buel) Carter, was born in Killingworth, Conn., July 10th, 1779. He studied medicine with Dr. Austin Olcott, of Clinton, commenced practice in Saybrook, Conn., in September, 1802; was married to Elizabeth Redfield, of Clinton, Conn., October 3, 1803, by whom he had eight daughters. He united with the Congregational Church, of Saybrook, October 1st, 1809, of which he was a very active member.

He received his honorary degree of M.D. from Yale College, September 21, 1822. After practicing in Saybrook for a third of a century, he removed to Vernon, N. Y., and died in 1853, aged 74; was buried in Saybrook.

He was a first-class teacher of medicine, and had many students, among whom was Dr. Reynold Webb, who completed his course with him after the death of Dr. Ely; also, the late Dr. Shepard, of Essex.

DR. GEORGE HASKELL ABERNETHY was born at Harwinton, Conn. He was the son of Wm. C. Abernethy. His grandfather William was a physician; his uncle Roswell received the honorary degree of M.D., at Yale College, in 1825, and John Jay Abernethy, son of Roswell, graduated at Yale, in 1825, and at the College of Physicians and Surgeons, New York, in 1828; was surgeon in the Navy, and died in New Jersey, in 1879.

Dr. G. H. Abernethy received the degree of M.D., from Yale College, in 1830. He was a student with Dr. B. H. Catlin, then of Haddam. After graduation, he spent a year in Bellevue Hospital, and in 1831 commenced practice in Chester. In the

fall of 1822, he married Miss Maria, daughter of Samuel Colt, Esq., a prominent merchant of Chester. They had no children.

Dr. Abernethy was Clerk of the Middlesex County Society, in 1841-42, and Fellow in 1835 and 1840. He was enthusiastic and successful in his profession, was tall and strikingly handsome, and very popular in the community. He had a very large practice, was passionately fond of fine horses, and was seriously injured by a horse, from which he never recovered. His health gradually failed, and in 1843 he went West to recruit, but gradually grew worse, and in the fall of 1844 died at Augusta, Illinois.

DR. JONAH CONE was born in East Haddam, May 17, 1763, married January 17, 1797, died September 18, 1830, of typhus fever. Educated in common school; then studied the languages with Rev. Elijah Parsons, and studied medicine with Dr. Thomas Mosely. He practiced all his life in East Haddam.

OBITUARIES.

JAMES C. JACKSON, M.D., HARTFORD.

BY GURDON W. RUSSELL, M.D., HARTFORD.

James Corbin Jackson, the son of Hon. Eleazer, and Lois Corbin Jackson, was born at Cornish, New Hampshire, August 22, 1818. He attended Kimball Union Academy, and graduated at Dartmouth College in 1844. A short time was spent with Dr. Blanchard of Meriden, when he went to Philadelphia, pursuing his studies there, and received his degree of Doctor of Medicine from Jefferson Medical College, in 1847. Soon after he came to Hartford, where he remained in active professional life, until his death, February 7, 1882, from pneumonia.

He was one of the attending physicians of the Hartford Hospital, was a director in the Retreat for the Insane, in the Watkinson Library, in the Security Company, in the Gaslight Company, in the Cedar Hill Cemetery Association—which he was largely instrumental in establishing—and an active member of the committee of the First District School. At one time he was an Alderman of the city, and a Park Commissioner. He was a member of the First Baptist Society, and in politics was a Democrat of the old school, which was very natural, considering that he came from New Hampshire, where in his early days the genuine democracy might have been found.

He was twice married; first, to Mrs. Fanny Childs, with whom he lived in great happiness for many years; and subsequently to Miss Helen Lyman, who survives him. He had no children by either marriage. Though slender, he was not delicate, and was capable of enduring much fatigue; his parents had died at a good old age, and the prospect of a long life was seemingly before him. A year previous to his death, however, he had a severe attack of rheumatism from which he never fully recovered, so that with the

anxiety, and watchings, and death of a dear member of his family, he yielded readily to the severe attack of pneumonia.

The year previous to his coming to Hartford, the City Medical Society had been formed, and as it had been found necessary to increase the fees for medical services, this act caused no small commotion among some of the citizens. Every new comer was desired by some not to join the Society, or adopt its table of fees, but to adhere to the old one, and a promise of much business was made if this should be done. To a young man, ambitious of success, and unknown in town, this was a temptation which every one would not put aside. Our friend, however, cast his lot with his brethren, realizing that the small advance from the fees established many years before was only reasonable and just. At that time the visiting fee was only seventy-five cents, and as the expenses of living had been materially increased, the advance to one dollar was perfectly proper. Previous to the organization of the Society there had been no general union of interests, or special kindly feeling in the profession of the town. Although there was a fee-table established some time before 1820, I think, yet all did not consider themselves bound by it, so that visits were not unfrequently made for fifty cents, when patients were abundantly able to pay. It was for these physicians, Dr. Sumner wittily said, quite an effort to come up to a dollar, they had been so accustomed to lag behind; it was for them a long leap.

Dr. Jackson soon made acquaintances and friends, and, as quickly as any young man could expect, began to find some business. If it was not all profitable, it was useful; besides giving him public notice, it brought to him experience and knowledge. He worked faithfully, whether remunerated or not. Many times have I heard him revert to those days of uncompensated labor, as having been of great use to him, and also as being very right and proper, and as being a sort of discipline or apprenticeship of much value to any young man. If in his later years he expressed the fear that some of our younger members were more desirous of their ease, why, he only indulged in the laments which are said to be the accompaniments of advancing age, and which will doubtless be made by every generation after us. The latter days were said to be worse than the former ones thousands of years ago.

With advancing years he became well known in the community,

devoting himself more especially to the practice of medicine. I think that he was at one time ambitious of excelling in obstetrics, and did attend more cases than any other practitioner in the city. His strong constitution, knowledge, and admirable patience, well fitted him for this part of his work. But this wore upon him, so that, complaining of the fatigue, he after a while gave up a good share of it, very much to his comfort and convenience, and doubtless with no pecuniary loss. He was a very creditable operator in surgery, and was possessed of considerable mechanical ingenuity.

In all his matters he was disposed to "make haste slowly." However much he might be pressed by business, yet he was ready to talk, seemingly in no hurry, entirely free from fuming and fretting, though pleased perhaps to tell of how much he was obliged to do, and how much he was expected to do, for the day. Occasionally one would wonder why he did not immediately set about it, for his moderation kept him at work until late at night. This happy condition of thought and action was doubtless of great benefit, saving him much of the wear of the nervous, hasty man, and I always supposed would result in a long life, particularly as his parents survived to a good old age. There was not one in the city, two years before his death, whose prospects for fourscore years seemed as good as his. So, his death came suddenly to all, and with great sorrow to those who knew him intimately. When advancing in life one finds his companions dropping steadily away, the number narrowing with increased rapidity each succeeding year, he feels the loss as a personal one, in a sense far different from the time when he was full of the freshness of youth. If he makes no new friends, supplementing the loss of the old ones, then is he pitiable indeed. The love of life, of exertion, of duty, is passed away, and the existence becomes little short of a selfish or merely animal one.

The structure of our friend's mind was eminently logical. He liked to study out a matter, to look at it calmly, turn it over in all its ways, and to think about it, and that, too, deliberately. Perhaps his perceptions were quick, but the manifestations were slow. His judgment was exceedingly good; he took time for investigation, was patient, unprejudiced, seeking for the truth. So he studied his cases well, endeavoring to ascertain where the trouble lay, and the proper remedies for it. He was decidedly conserva-

tive in his practice, believing fully in the virtue of established remedies, and sceptical of the vaunted power of many of the new ones. While so many forget or never are aware of the value of many of the old articles of the materia medica, he strongly believed in and used them; he was not unduly critical, though conservative. It is doubtful if he was a great reader; the amount of business upon his hands, and the deliberation with which he did it, prevented this; but he thought his own thoughts, and with a good mind he was well able to maintain his opinions. It is not meant by this that he did not read much, or perhaps more than most men in our profession, for he did, keeping himself well abreast with all new discoveries, and well posted as to the current literature and the news of the day.

He was treasurer of our State Society for many years. Entering upon his duties when its finances were in a confused and generally unsatisfactory condition, he by diligence, close scrutiny, and untiring labor, was able to leave his office with a balance in its favor. It may interest some to know that the Society was about that time in quite a demoralized condition, so that it began to be a question with some whether its further existence was desirable. The membership was diminishing, the interest in its meetings was yearly less and less, the payment of the small annual tax complained of, or, by many, not paid at all. The nominal assets in the treasury were great, consisting of the arrears of indebtedness for many years. The Fellows were paid for attendance in debenture bills which were almost worthless, and it was with difficulty that enough money was raised to pay for printing the annual Proceedings. This was mostly a mere record of the appointment of officers, and committees, and such routine business. It was seen that something more than this was due from a body of educated men, and gradually there began to appear papers and reports, so that now our volume of Proceedings is creditable to the profession in the State. Dr. Jackson recognized this state of feeling, and in his official capacity aided in effecting a change. Any one can see what has been done by comparing our transactions now with those of thirty years since.

In personal appearance he was slender, had a good head, light hair, expressive eyes, and thin face. His good-nature was great; his sense of humor quite marked, though it took him some time to be fully acquainted with it; it entered him slowly, but he

enjoyed it nevertheless. Though his walk was rapid, and he was pressed by business, yet he would stop with an acquaintance with no sign of impatience. He was strictly honest, both in actions and opinions; he was perfectly reliable, so that you could always know where to find him; the letter and the spirit of the law he believed in. While he was firm in his political views, yet he detested, and would not abide, any trickery or meanness, or double-dealing, or abandonment of principle. Though decided in his religious views, and a consistent member of his church, yet he had that blessed gift of charity, which is the best evidence of a Christian spirit.

Dr. Jackson was very agreeable as a companion. He enjoyed exceedingly a good story and a joke; was fond of fishing and excursions into the country; his social nature found full play on all these occasions. He anticipated with pleasure his annual visit to his native State, and owned to a downright enjoyment in rural pursuits. Brought up on a farm, and working as a farmer's boy until he commenced his studies, he found a relaxation in his return to his old home and its quiet primitive ways. He had a fine taste in matters of art; was interested in horticulture, in music, in paintings. Nearly a year spent in Europe with his wife was one of much enjoyment, gratifying his curiosity and improving his mind. He often referred to the time spent there with the keenest pleasure, and to the acquaintances which he formed.

We feel as though a good man had left us, kind and agreeable in his nature, skilled in his profession, and acting for the best interests of society.

LUCIAN SUMNER WILCOX, M.D., HARTFORD.

BY A. W. BARROWS, M.D., HARTFORD.

LUCIAN SUMNER WILCOX, M.D., was born in Granby, Conn., July 17, 1826, and died in Hartford November 26, 1881. He was the eldest son of Dr. Justus D. Wilcox and Emeline (Hayes) Wilcox. His father was a well-known and highly-esteemed physician and citizen. After improving the opportunities afforded by the district school, he prepared for college at the Westfield and Wil-

braham academies and graduated from Yale College in 1850. During the three following years he was engaged in teaching, being the principal of an academy at Easton, Conn. In 1853 he married Miss Catharine Silliman, a most estimable lady of the latter place. He graduated in medicine, receiving his diploma with the highest honors of his class, that of valedictorian, from the Medical Department of Yale College in 1855. He, with his wife, spent a year in the Indian Territory, where he was offered but declined the presidency of Cherokee College, with which he was associated as a teacher; and in the mean time he pursued the study and practice of medicine to a considerable extent. He used to remark that his stay there was not only pleasant but of lasting benefit to him, as it enabled him to observe phases of disease which he had not met with elsewhere.

On returning to Connecticut, he selected Hartford as his future residence and field for practice, opening an office there in 1857. He came to Hartford under favorable circumstances. The city was not over-crowded with physicians, and the civil war, which followed a few years later, called away several of its prominent physicians to serve as surgeons in the army, thus leaving an open field for those who remained. His medical brethren extended to him a cordial welcome, and were disposed to utter a kind word in his behalf. But more and better than this, Dr. Wilcox brought with him a good name as a scholar, well versed in his profession, courteous and genial in his manners, and bearing the character of a truly Christian gentleman.

He was not long in winning for himself many warm friends, who gave him their confidence and support. His devotion to his profession and success in practice soon gave him a good degree of prominence, and ere long placed him in the ranks of our leading physicians; a position which he well sustained to the last. He placed his aim high. A short time before his death he remarked to a friend substantially as follows: that when he came to Hartford it was with the desire and purpose of becoming known and recognized as a well-qualified, faithful physician, who should merit and receive the confidence of the people. This was a very noble and praiseworthy ideal, and for the attainment of which he was willing to devote his best energies. He possessed great tenacity of purpose; thoroughness and perseverance in whatever he attempted were marked traits in his character. Scholarly in his

tastes and habits. he furnished himself with a well-selected library, containing a large collection of choice standard works, both in medicine and general literature. These were obtained for use, and not simply to adorn his shelves. They were read and studied. Not unfrequently at a late hour, and after the fatigues of a hard day's work, he might be found eagerly engaged in searching their pages. He emphasized the importance of a thorough knowledge of approved standard works, while he did not undervalue the benefits to be gained from the numerous periodicals of the day. He kept himself abreast of the times, and well posted in current events. Dr. Wilcox "was endowed with the higher social qualities of head and heart," which gave him ready access into cultivated society, and endeared him to a wide circle of friends. Polite and attentive, he had a happy faculty for recognizing his friends and extending to them a courteous and cordial greeting. If it cannot be said of him that he was a great wit, or a fluent talker, he was intelligent, chaste, and discreet in the use of language, and in conversation as in writing he was careful to put the right word in the right place.

Refined in his tastes, he was scrupulously neat in his person and dress, had a sensitive ear for music, and a quick eye for the beautiful, whether seen in nature or art. As a member of society, his influence was felt in favor of temperance, strict morals, and correct deportment, and in the furtherance of all such benevolent and reformatory movements as commended themselves to his judgment. Public-spirited without being an active politician, neither desiring nor accepting political preferments, he held decided convictions relative to matters of public interests, which he did not hesitate to avow and maintain. He was a valued member of the Congregational church, with which he became united in his youth.

In the treatment of his patients, he was conscientious, faithful, and attentive, manifesting an interest in their welfare well calculated to inspire and hold their confidence. Throughout his practice he had the patronage and esteem of many worthy families, as their trusted physician and friend. As a practitioner, Dr. Wilcox was thorough and discriminating in the investigation of disease, inquiring carefully into the history and pathology of the case, paying attention to minute details which might appear of small account to some, but which by him were deemed important. He was not hasty in his decisions, taking ample time for consideration,

but when his opinion was once formed it was not readily given up. While showing a proper deference for the views of others, he was independent in his methods of thinking and acting. He had greater confidence in the curative powers of medicine, and less in the recuperative forces of nature, than some. He prescribed expecting to see results. He gave many medicines with a good degree of freedom, but was very cautious in the use of others, especially some of the more active narcotics. He did not advocate the use of heroic doses of quinine, neither did he sympathize with the idea of wholly discarding the lancet, considering its use not only efficacious, but needful, in some cases. Dr. Wilcox fully appreciated progress in the practice of medicine, as in other things; still I think it was his nature to be conservative, not easily yielding old-established views for new or untried theories.

Dr. Wilcox loved his profession, and was deeply interested in its welfare; and if on some occasions he and some of his medical brethren failed to fully agree in regard to certain points bearing upon professional interests, he, nevertheless, was outspoken in his abhorrence of all forms of shams and empiricisms. He was an active member of various medical associations and societies, and added interest and value to their proceedings by his faithful attendance on their meetings, participating in their discussions, and often serving on important committees.

As manifesting the esteem in which he was held by the Hartford City Medical Society, I may be pardoned if I quote from a minute adopted by the society and spread on its records, viz.: "That in the death of Dr. Wilcox, this society has lost one of its most valuable members; that, until stricken down by disease, he was one of its most constant attendants, bringing to its discussions a well-trained mind, enlarged by extensive reading and practice. Few of its members did more to render its gatherings pleasant and profitable." As early as about 1852, measures were instituted by the Hartford County Society for the purpose of gathering and collating such facts, relative to vital statistics, hygiene, and other matters of professional interest, as should tend to promote the usefulness of the profession and the welfare of the community.

This work, although it progressed slowly, accomplished something; and at a later period, when the State Society took up the same object on a scale embracing the whole state, still more was done, till at length the annual report on matters of professional

interest has become one of the most valuable and interesting features of the proceedings of the society. Dr. Wilcox did much as chairman of committees, and by personal efforts, to carry forward this important enterprise.

As a member of a committee, appointed by the Fellows of the State Society, in 1868, to take into consideration the desirability of revising the constitution and by-laws of the society, and report at a subsequent meeting any such changes as might seem to it advisable, Dr. Wilcox took an active interest, and bore an important part. The measures recommended by this committee were mainly approved and adopted. The good results which have followed are apparent to all. He was a permanent member of the American Medical Association and repeatedly attended its meetings. For many years he was medical examiner and consulting physician for the Connecticut Mutual Life Insurance Company. The duties of this office were a severe tax, both on his strength and time. In 1877, he was appointed Professor of the Theory and Practice of Medicine in the Medical Department of Yale College. After considerable hesitation he accepted the position and entered on its duties, fully appreciating its claims and responsibilities. That he discharged these duties faithfully and ably, is well attested by the esteem in which he was held, both by his colleagues and students. The following letter from Prof. C. A. Lindsley, Dean of the Faculty, will disclose more fully than any words of mine his interest in the welfare of the college, in the class, and his desire to do his whole duty, and the mutual confidence and sympathy of purpose which existed between him and the other professors:

NEW HAVEN, CONN., May 7, 1882.

My Dear Doctor:

In reply to your inquiries about our lamented friend, I have to say, that when the Professorship was proposed to him for acceptance, he hesitated about it—no doubt for many reasons; but I am fully convinced that nothing weighed heavier upon his mind than a deep sense of the responsibilities of the position. With his strict, conscientious views of duty, it appeared to him a most serious question whether he could consistently, with his present obligations, undertake and satisfactorily perform a task involving so much the interests of the college and its students, and depending so much upon his personal effort and ability.

This conscientious sensitiveness to the claims of his chair upon his time and his best efforts never forsook him so long as his health enabled him to work. With his work, his interest in it

increased, and when at last he felt it his duty to resign, he notified me of such intention. I have his letter before me, and the candid, affectionate expressions he uses tempts me to transcribe a few lines: "My great love of giving instruction to those medical classes, the yearly renewed interest in them, the tender and affectionate regard with which you all have always treated me, the strong friendship which has existed between us all, both mutually and without suspicion, the harmony of purpose and of action which *now* extends throughout the whole Faculty—all these conditions in their actuality must henceforth be lost to me.

"When I entered among you I did so with great reluctance, fearing that I never could reach my ideal of what a teacher should be, loaded as I was with heavy work at home. But, having taken the step, I determined to work with what powers I had to the end.

"In leaving you, it is like leaving a first love late in life, and it breaks me down. I give you all love and prayers, and wish you the success you all so richly deserve. I will send my resignation soon."

(The above letter was dated Sept. 24, 1881.)

After receiving the foregoing, I immediately wrote him, by direction of the Faculty, begging him not to resign. I can assure you that Dr. Wilcox held a high place in the estimation of his colleagues, not only for the full and able discharge of his duties in the college, for so long a time as his strength permitted (and no doubt much longer), but also for his personal worth, his amiable character, and lovable disposition, by which he endeared himself to us all.

I am very truly yours,

C. A. LINDSLEY.

Dr Wilcox, while usually enjoying good health, was far from being robust. His figure was erect and well poised but rather slender. He had a large head, good face, and fair complexion. His nervous temperament and active mind would not permit of his being long idle. He seldom allowed himself even a day for rest or recreation, till forced to do so by impaired health—a mistake which he realized and lamented when too late. It is not strange, then, that his constitution should yield when called to endure some severe and unusual pressure. He accepted the Professor's chair at Yale only a few weeks before the commencement of the term, and while engaged in an extensive practice, thus giving him almost no opportunity to prepare for his lecture course in advance, consequently he was compelled to spend many of the late hours of the night in preparing to meet his class on the following day. Without doubt this over-work and lack of sufficient rest contributed in no small degree to weaken his vitality, so that when the fatal stroke came, which at length cut him off in the

midst of his days and usefulness, he had but small physical power to withstand its force. Still, his will was strong and would not readily yield to discouragement. Battling hopefully and courageously for a long time against great odds, he continued to make his daily rounds among his patients until forced to desist, from sheer pain and weakness. In the autumn of 1876, he fell from a ladder, some ten or twelve feet to the ground, which caused a severe shock to his system, and although he seemed to recover from its effects in a few days, yet he afterwards felt that it laid the foundation for future trouble. Some two or three years later he was seriously injured in the back and side from a carriage collision, from which he never recovered. A protracted and painful disease of the spine (dry caries of the vertebræ), connected with disease of the kidneys, developed, and notwithstanding the unremitting efforts of the best medical skill, and the constant watchfulness of devoted friends, he continued gradually to waste in strength and flesh, till, at length, death came to his relief.

Throughout his long and painful sickness he was sustained and comforted by a steady Christian faith and hope. It may not be amiss to add here, that owing to the depressing effect of his disease on his nervous system, Dr. Wilcox declined, for some months before his death, to see many of his friends (his medical brethren included), who called to express their sympathy, and would have been pleased to take him by the hand. This should not be remembered as a mark of indifference or want of appreciation on his part, but rather to a feeling of inability to meet the strain required to make the effort.

His funeral was attended by a large gathering of his medical brethren, some of whom came from distant places, and by many other appreciative friends, who deeply lamented his death.

In his social relations Dr. Wilcox was especially happy. A devoted husband and father, he ever sought to make his home attractive, the center of joy and comfort to all. He was called to pass through repeated and sore trials in the loss of three of his children. The eldest, an only son, was taken when about one year old, one child died in early infancy, and an interesting and promising daughter was called away at twelve years of age. This was a great and lasting sorrow to him.

Mrs. Wilcox and the two younger daughters survive him.

THOMAS A. DUTTON, M.D., WEST HAVEN.

Dr. Dutton was born in Oxford, Connecticut, January 29, 1802. He was the son of Elizabeth and Hosea Dutton, M.D. He studied medicine with his father, and at Yale Medical School, and received a license to practice Medicine and Surgery from the Connecticut Medical Society, March 10th, 1824, signed by Thomas Hubbard, the President of the Society, and Jonathan Knight, Clerk of the Committee of Examination. According to the list of physicians in the Proceedings of the Connecticut Medical Society for 1881, there are now only two physicians in the State whose authority to practice is based on a license from the Medical Society, instead of a diploma from a Medical School. Dr. Dutton was a great favorite in the town of his birth, and practiced there for many years. He subsequently moved to Newtown, thence to Birmingham, where he practiced ten years, thence to Milford where he remained fifteen years, and finally to West Haven, soon after the beginning of his seventy-third year. From constant exposure in the practice of his profession, in the severe weather of February, he was so broken down that he suffered a shock of paralysis, from which he never recovered, but remained an invalid during the last six and a half years of his life. During the early part of this time he did some little practice, but soon retired from the active exercise of his profession. He suffered another shock December 19, 1880, and for the last nine months of his life was utterly helpless. He died a peaceful death, September 14, 1881, aged seventy-nine years and eight months.

Dr. Dutton made a public profession of his faith June 2, 1872, and became a member of the First Congregational Church in Milford. He was a very patient man, under all circumstances; marvelously so during his protracted illness. He was loving and kind in all his family and other relations, and generous to a fault. The magnitude of his virtues entirely eclipsed his idiosyncrasies. He was a noble man to look upon, and his character corresponded well with his looks. There was a childlike simplicity about him, and a transparent honesty that was truly beautiful to behold. He will be long remembered by all who knew him well.

STEPHEN HENRY BRONSON, M.D., NEW HAVEN.

BY WILLIAM H. CARMALT, M.D., NEW HAVEN.

S. Henry Bronson, the youngest son of Dr. Henry and Sarah M. (Lathrop) Bronson, was born in Waterbury, Conn., on the 18th of February, 1844. The characteristics with which we were familiar in his later life, were early developed. He was a quiet and affectionate lad, cautious in his statements, not answering a question unless he felt sure of the correctness of his reply—in contrast always to “the urchin who sat next him, who would sooner answer wrong than hesitate.”

He joined the Medical Class of Yale College in 1862, studied industriously for three and a half years, and was graduated in 1866. He was selected by his comrades for the class orator, but his modesty caused him to decline the honor. With the characteristic thoroughness which marked all his work through life, he was not satisfied with simply obtaining his degree before plunging into practice, but went to Cambridge, Mass., to study Comparative Anatomy for more than a year, with Professor Jeffries Wyman, “whom to know was a liberal education.” He attended at the same time the lectures at the Harvard Medical School, and after his return to New Haven, continued his studies in Comparative Anatomy with Prof. Verrill of Yale College.

Still unsatisfied with the opportunities offered in this country for pursuing his favorite study, he sailed in 1867 for Europe. Halting in London long enough to make the acquaintance of Prof. Richard Owen, by his advice he proceeded to Paris. There he entered the Laboratory of Comparative Anatomy attached to the Jardin des Plantes, became intimate with Mr. George Pouchet, a son of the eminent naturalist, himself an author of good repute, and first assistant in the Laboratory. The friendship thus formed lasted for years after Dr. Bronson's return to this country. Beside his especial studies in Comparative Anatomy, he attended Lectures in the Medical Sciences and Natural History by Messrs. Nelaton, Robin, Claude Bernard, Jarjavray, Quatrefages, Milne Edwards, and many others of learning and world-wide reputations. He worked hard in Paris for nearly three years, and then, after

making a trip of a couple of months in Germany, returned to America in June, 1870.

By July, 1871, the doctor had fairly settled himself to work at his profession in New Haven, and from this time until his death his career has been known to most of us. He worked assiduously to establish the New Haven Dispensary, which was opened December 1st, 1871, and he continued one of its physicians, its secretary, and chief executive officer until his death. His interest in its welfare never abated, and frequently included the care of indigent patients at their homes, without other reward than their gratitude, and the consciousness of well-doing. His memory will ever be held in grateful remembrance by all connected with the institution, and by hundreds of the poor, for whom he cared with self-sacrificing devotion. In 1874 he was appointed one of the physicians to the New Haven Hospital, and there gave the thorough attention to the care of his patients so characteristic of his whole practice, giving minute attention to diseases of the thoracic organs, in the detection of which he became greatly accomplished. In 1880 he was placed by the directors upon the Prudential Committee. He at once showed the same painstaking care of every detail that had made his management of the Dispensary so successful. It was largely due to his care in stopping leaks, and establishing reforms, that the cost of supporting the inmates was reduced from \$7.17 to \$6.03 per week without sacrificing in any way the efficiency of the institution. His associates on that Committee bear willing testimony to his worth in their annual report, in the following words: "A loss which we have greatly to deplore was caused by the sudden death of our associate, Dr. S. Henry Bronson. By his attainments and natural gifts he was especially fitted for the work of the Prudential Committee; he was careful, painstaking, unwearying in his attention to details, sober, sagacious in his judgments, methodical, and industrious, and withal of such even temper and attractive character, that association with him was a pleasure. We felt his death both as a personal loss, and a misfortune to the Hospital."

His last illness was short, and the end startling in its suddenness—few knew of his sickness until his death was announced. Although somewhat ailing for perhaps thirty-six hours before his death, he did not regard himself as sufficiently ill to ask the assistance of

his medical friends, but staid in bed all the morning of August 19, 1880, coming down to his office about one o'clock. At five, he was found unconscious upon his lounge, and died at nine o'clock in the evening without having been roused from his lethargic condition. A post mortem examination disclosed intense congestion and destructive changes of the kidneys, a large proportion of albumen and a deficiency of urea in the urine found in the bladder after death. There is reason to believe that Dr. Bronson knew of his kidney disease for several years, but with his usual unselfishness had said nothing about it, preferring to die with the harness on, rather than to live a life of invalidism and anxiety to his friends. His age at his death was thirty-six years and six months.

With the careful and thorough preparation that he had received for his profession, his cautious habit of mind, and his intelligent industry, there is no reasonable doubt that he would have risen to a position of professional prominence in the State equal to that which he was acquiring in the city in which he lived. He had been made President of the City Association at an earlier age than any ever elected to that post; he had been a lecturer on Physiology in the Medical Department of Yale College, and besides the two appointments previously mentioned, he was at the time of his death a member of the City Board of Health.

His colleagues in all these positions regarded his opinions with respect. His patients loved him for his affectionate and skillful care. We can but regard his death as a great loss to the advancement of medical science in the State. His father, honored in the counsels of our State Society, may, without affectation, mourn the non-fruiting of the hopes he had every right to entertain of a brilliant and honored career to his son, whose professional studies he had so judiciously guided. He had every right to feel a just pride that his name was to be honorably perpetuated in the profession he had himself loved and adorned.

JOHN MARTIN AIMES, M. D., WEST HAVEN.

BY J. F. BARNETT, M. D., WEST HAVEN.

Dr. J. M. Aimes departed this life October 27th, 1881. He was 53 years of age. He was born in Gold street, New York city, in 1828, and was the oldest son of Peter and Matilda Aimes, a family of means and position. His boyhood and early life were passed in New York city, where his preparatory and collegiate studies were pursued. With the idea of giving him the advantages of a liberal education he was first sent to the Mechanic's Society School—472 Broadway. His preparation being completed at a grammar school, he entered Columbia College in 1845 and graduated from that institution in 1849. He had formed an attachment for Delia Sickles, and in the same year in which he graduated from Columbia they were married. Shortly after this his parents moved permanently to Oyster River, in the town of Orange, Conn. The Doctor came with them, and, imbued with the desire for some profession in obedience to his taste, he entered the Yale Medical School, from which he graduated in 1858. His first office was on Henry street, New York, which location, however, he retained for only a short time—about one year—when he returned to West Haven, in this state, where, until within the past 12 years, he has been in more or less active practice.

His marriage was not a happy one. Their temperaments and dispositions were so incompatible that within a short time they separated. In 1863 the Doctor remarried. His second wife was Margaret E. Thornton, a lady of southern birth. From her he had five children, three of whom—two girls and a boy—are now living.

Dr. Aimes was a man of unusual ability, both natural and acquired. He was gifted with a tireless application and retentive memory. His tastes were literary and he always bore the reputation of being a student. His mind was a storehouse of knowledge so well arranged as to be at any time ready for use. Easy and polished in manner, intelligent, with a keen sense of humor, he made a rare host or companion in his social moods. He had a very pronounced character, was outspoken, even to bluntness, and regardless of fear or favor in expressing his convictions.

From this fact he got the reputation of being eccentric, among some of his townsmen, but his ability was everywhere acknowledged and respected. He was proficient in military matters and for some years held the position of Captain in one of our State regiments. He was an ardent student of antiquities and few about here have pursued their studies farther or more thoroughly. His love of botany was natural, and he devoted himself to this pursuit as a pastime.

In his library is a fine herbarium of our indigenous medicinal plants.

As a practitioner he was skillful and successful, but, with ample private means, both here and in N. Y. city, his mind was distracted from the active pursuit of his profession in their care. In about the year 1869 he moved his office from the village of West Haven to his beautiful estate at Oyster River, which practically ended his professional activity.

Many of his patients speak of him with gratitude, and during the last ten years he has often been forced to attend those who could not consent to employ another physician. Up to the year of his death he was a regular attendant on our county meetings and was always in good standing with this society.

In politics he was a staunch Democrat and a popular leader of that party in his town. He was strongly identified with the progressive changes which have taken place, in which he took a hard-working interest. At the time of his death he was chairman of the school board, which position he had held for a number of years.

This was the only office within the gift of the town which he cared to accept. His interest in educational matters was enthusiastic, and in his capacity as chairman of the school visitors he was energetic and efficient. It is largely through his counsel and work that the graded schools in the town of Orange have reached their high standard.

The cause of his death was valvular disease of the heart, which was no doubt the result of arthritic disease induced by the habit of generous living and slight exercise. There was a history of occasional attacks of epilepsy, and it was during one of these seizures that he expired from its deranging effects on the circulation.

ELIJAH DYER, M.D., NORWICH.

BY E. C. KINNEY, M.D., NORWICH.

Dr. Elijah Dyer was born at Canterbury, March 22, 1805, and died March 10, 1882, at Norwich.

His boyhood and youth were spent in his native town. He studied medicine with Dr. Andrew Harris of Canterbury, and with his uncle, Dr. Stephen Robinson of Providence, R. I. He attended lectures at Brunswick Medical School, connected with Bowdoin College, Maine, also at Berkshire Medical Institution, Williams College, Mass., where he was graduated December 17, 1828. He commenced practice soon after at Owego, Tioga county, N. Y., where he remained one year, and concluded to return to his native State. In 1830 he commenced practice in Norwich, where he continued to reside till his death. He married Miss Abigail C. Morse of Canterbury, Conn., April 11, 1831, who, with two sons and a daughter, survives him.

He was United States Pension Surgeon for this vicinity for a few years, when, in 1877, owing to his large practice and the infirmities of age, he resigned the position, receiving from that department a highly complimentary letter for his honorable course in that capacity.

Dr. Dyer was of a quiet and retiring disposition, never seeking prominence or publicity. His kindly nature and prompt response to the calls of the poor won from that class the heartiest expressions of gratefulness for his good offices. In all the social relations he was so courteous, genial, just, and considerate, that as husband, father, neighbor, and friend, he held a very strong place in the affections of those who had the good fortune to know him best by personal association.

For about two years he had been gradually failing, and on Friday evening, March 10th, he passed quietly away, having literally gone to sleep.

NATHANIEL D. HAIGHT, M.D., STAMFORD.

BY H. P. GEIB, M.D., STAMFORD.

The subject of this obituary, Dr. Nathaniel Drake Haight, was born in Peekskill, in the year 1803, and died Sept., 1880; he was therefore seventy-seven years of age at the time of his death. He had the advantages of a good education and commenced the study of medicine in the office of the late Dr. Perry, of Ridgefield. After remaining with him about two years, he attended lectures at the New York medical college, graduating in 1825. He commenced the practice of medicine in Stamford, in 1826, and continued to practice in this place for nearly (51) fifty-one years, and when he died Stamford lost one of its best and noblest of citizens. At the time of his death (with one exception), he was the oldest practitioner in Fairfield county. Perhaps no one ever practiced in this community that was more dearly beloved and better known. The amount of work he was capable of doing was simply astonishing. He was popular among all classes, and it is not too much to say that he was beloved by all who knew him. In appearance he was dignified, courteous in manner, and his bearing in the sick-room was such as to impress his patients with that confidence which goes so far in battling with disease. The esteem in which he was held by his medical associates was a just recognition of his talent and abilities. In 1870 the honorary degree of M.D. was conferred upon him by the Yale medical college. At the time of his settlement in Stamford, half a century before his death, the town was small, and the country about it sparsely settled. Enjoying a large practice, under such circumstances, his life was truly spent in the relief of human suffering. Cheerfully and promptly he responded to all calls upon him. He possessed an intellectual character, and kept himself familiar with the current medical literature and scientific events of the day. During his long professional career he never lost interest in his calling. To within a few months of his death, he was as enthusiastic in subjects pertaining to medicine as a young student. His death was caused by valvular insufficiency, attended with dropsy, confining him to his bed for seven months before death. So deeply had the character and life of Dr Haight impressed itself on all who knew him in this com.

munity, that the Rector of St. John's Episcopal Church thought it fitting to preach a sermon on his remembrance in addition to the usual service of the Episcopal Church.

JAMES B. WHITCOMB, M.D., BROOKLYN.

BY SAMUEL HUTCHINS, M.D., KILLINGLY.

Died, at his residence in Brooklyn, Windham county, Conn., Dec. 22d, 1880, James B. Whitcomb, M.D., of pneumonitis, after an illness of about two weeks, at the age of 76 years and 3 months.

He was born in Bolton, Mass., Sept. 1st, 1804. He received an academic education at Leicester Academy, Mass., and studied medicine under Dr. Flint of that place. He received a diploma from Bowdoin Medical College, in Brunswick, Me., in May, 1826. He commenced practice in Brooklyn, Conn., in the year 1827. He moved to Laport county, Indiana, in 1836, and returned to Brooklyn in 1840, his medical life thus being more than half a century. During most of this time he was a member of the State Medical Society, and for seventeen years was clerk of Windham County Medical Society, many times representing the county in the State society as fellow.

In October, 1861, he volunteered his services to the country, and received the appointment of surgeon to the Eleventh Regiment Connecticut Volunteers, and went south with the Burnside expedition to North Carolina. He remained in the army until December, 1865, when he was honorably discharged.

He represented the town of Brooklyn in the State Legislature in 1866, and again in 1876. He served for eight years as trustee of the State Reform School. He was appointed a delegate in 1872 to the World's Prison Reform Convention, held in London, and again in 1874 to the Prison Reform Convention in St. Louis, Mo. He took an early and active part in the abolition of slavery, and for many years was called an "Abolitionist." He fortunately lived to see the great desire of his heart in this respect consummated.

In 1830 he married Mary Louise Fisher, daughter of David Fisher, Esq., of Killingly, Conn. She died in 1848. In 1849 he married Maria E. Spalding, daughter of Judge Bela P. Spalding of Brooklyn, Conn. She died in 1873. In 1879 he married Mrs. Harriet E. Richmond, daughter of Henry L. Webster of Providence, R. I.

For more than fifty years he labored with untiring energy for the good of the community in which he lived, identifying himself with every public interest, as well as for the amelioration of suffering by the sick and distressed ; and by the community and all who knew him he is greatly lamented.

LEWIS WILLIAMS, M.D., POMFRET.

By R. ROBINSON, M.D., DANIELSONVILLE.

Dr. Lewis Williams was born in the town of Pomfret, Conn., in 1815. At the age of fifteen he entered Amherst College. Continuous application induced ocular disease, compelling him to abandon his studies during the second year.

Upon the re establishment of his health he began the study of medicine, and graduated at Harvard Medical College in 1842. He married Clara C. Baldwin of Woburn, Mass., the following year, and commenced practice in his native town, where he continued to work almost unremittingly for nearly forty years. He was an active member of the Windham County Medical Society, and for many years a permanent member of the American Medical Association. In 1850 he was appointed one of the examining committee for the medical department of Yale College, serving twice for a term of three years each. For eleven years before his death he was one of the Quarterly Visitors to the Insane Retreat, Hartford, Conn., and his name was associated with all the educational interests of his own town. He was for some years one of the Trustees of the State Normal School.

At the bedside he was courageous and hopeful, careful and discriminating in diagnosis, and prompt in the application of remedies. He kept pace with medical progress, allowed no day

to pass without some study, and remained a student to the end of his life. He was deeply impressed with the dignity of his profession, and of his responsibilities as one of its members. He had the highest sense of all the rules of professional courtesy, and a strong abhorrence of quackery in all its forms. His indomitable will, his unceasing diligence, made him a success among his brethren. He stood forth prominently among his cotemporaries, and his counsels were always in demand. His sympathies were on the side of humanity and progress, and however men might differ from him in opinion, none could gainsay the honesty of his convictions or integrity of his purpose. With an intense dislike of contention, and an ardent love of harmony, he could never yield his lofty principles to the dictates of expediency, and if any have cause to remember his uncompromising inflexibility, all must acknowledge the manliness of his public life.

An obituary of such a man would be incomplete without mentioning the wife who for so many years was his companion and helpmeet. A woman of rare culture and Christian character, she was an inspiration to him in all his best endeavors, and made his home everything that the word can express, even in its highest and purest sense. Their hospitality was unbounded; yet, in spite of the cares incident thereto, this ever-active and tireless woman found time to assist her husband in much of his professional work, and he was proud to accord to her a large share in all his honors.

His own practice, and the calls for his services from his associates in his profession, made his duties numerous, his labors arduous, and he was ready to sacrifice his life to the "slow suicide of overwork."

He died at the age of 65, June 22, 1881, after an illness of only three weeks, of sub-acute cerebral meningitis with hemorrhage upon the surface of the right hemisphere of the brain.

The following is a brief history of the progress of the case:

I was called to see him June 3, 1881. He had been suffering from sharp, lancinating pain in the head, just above and about the left ear. The pain increased upon exertion, whether physical or mental. The rising from a recumbent to sitting, or from sitting to a standing position, would produce it. For some months he had noticed that when fatigued from much riding, he would have a

pain in his head, which would quickly disappear by taking something hot into his stomach, as a bit of broiled steak, or a cup of hot drink.

The doctor looked upon this pain as a neuralgia, due to an exhausted condition of the nervous system, having worked and studied harder than usual for the six months preceding, and having done work other than professional, that had given him considerable care and anxiety. He had just returned from attending the State Medical Society, where he had been unusually interested in some papers read having a bearing upon some cases he was treating. He complained that this outing had been fatiguing rather than restful. Still, he did not give up entirely, but was about the house, and attended to some office work. He was able to control the pain in his head at this time by hot drinks taken into the stomach, and now and then, a 5 to 10 gr. dose of quinine.

I saw him again upon the 5th of June, finding him down stairs, and able to wait upon table at dinner, and eat a very fair dinner himself. He took special interest in some patients I was visiting for him.

The pain, however, was not so easily controlled as before, and he had had to combine a small dose of morphia with his quinine to get relief. Fearing there might be congestion, due to brain irritation, as a result of overwork, I suggested that he drop the quinine and substitute some of the bromides. He objected to the bromides on the ground that they had at times been irritating to his stomach, at the same time insisting that it could not be congestion, but exhaustion, for, if congestion, quinine would not have given him relief.

For the next few days he continued to grow weaker, and the paroxysms of pain more frequent; the stomach became irritable, with frequent vomiting, rejecting the quinine and even the simplest food. Believing this due to some developing brain trouble, oxalate of cereum was given with decided benefit; citrate of caffeine in the morning, and a hypodermic of morphia when the pains were very severe, were substituted for the quinine and morphia by the stomach; absolute rest was enjoined, and the bowels moved, with a constipation pill, followed with an enema.

Upon the 11th of June, not having seen him for three days, I found the symptoms much worse. Patient unable to sit up or feed himself. Conversed with difficulty, though intelligently; prostration

very marked, tongue covered with a white, heavy fur; he could swallow only liquids; sneezing and coughing produced extreme pain in the head; pulse hard and incompressible—in fact, this had been peculiar to it from the beginning of his illness; temperature normal, urine normal in character, though scanty. As the bowels were still constipated, gave 3 gr. blue mass. following it with citrate of magnesia, repeating same upon the following day. About this time he refused to take anything into his stomach because of an inclination to cough or choke which brought on pain in his head, and for two days enemas of beef extract, cream, quinine, and brandy were given every four hours.

Upon the 15th, Dr. Rogers, of Pomfret, and Dr. Kent, of Putnam, met with me to consider his condition. A good deal of doubt existed in our minds as to the pathological changes going on in the brain. The possibility of its being sub-acute meningitis or passive congestion, was discussed, but the general opinion tended towards congestion, from the fact that the temperature up to that time had been normal. With this feeling in our minds, ergot was given in the enemas, as he could swallow nothing. Counter irritation was applied to the nape of the neck, in form of ammonia and chloroform, several times per day. Large enemas were given to get free evacuations of the bowels. The day following, there were what seemed to be involuntary movements of the bowels.

Considering his condition as exceedingly critical, it was thought best to ask Dr. Gage, of Worcester, to see him. He came on the following day, June 18th.

Meanwhile, the patient had brightened up considerably, possibly in consequence of the free evacuations and ergot relieving brain pressure. The pulse was softer and more compressible, and the night before he had been induced to take beef-juice and brandy by the stomach again.

The case looked more hopeful upon Dr. Gage's arrival, and, although in a critical condition, we all felt somewhat encouraged. Dr. Gage expressed no positive opinion as to the pathological changes going on in the brain, but inclined to the view that it might be a passive congestion at the base of the brain due to overwork; he advised the best nursing and no medicine, except a little quinine and a continuation of the ergot. Improvement continued till the following Monday, when he passed into a semi-comatose

condition, taking but little notice of anything. The stupor became more and more profound, ending in death about forty-eight hours afterward, at 11.30 A.M., June 22d, 1881.

During the last four days the temperature increased more or less constantly until it reached 103, the pulse at same time increasing in rapidity. There were also frequent involuntary micturitions accompanied with tremors or spasms of the extremities. Through the entire sickness the pupils responded to light, though, at times, a little slowly. There was at no time any delirium, and he answered questions, after a little hesitancy, intelligently until the last forty-eight hours. He had better control of his right hand and leg than of the left, yet there was not complete and perfect paralysis of the left side.

An autopsy of the brain was made five hours after death, Drs. Rogers, Kent, and myself being present. On removing the calvarium, a quantity of serum, estimated at from four to six ounces, was found between the surface of the brain and dura mater, and upon the right side, covering nearly the whole of the anterior and middle lobes was a clot, oval in shape, and about $2\frac{1}{4}$ by $3\frac{1}{2}$ inches in size. This clot produced a depression upon the brain from $\frac{1}{5}$ to $\frac{1}{3}$ of an inch. This clot we judged to have been the result of capillary hemorrhage two days before death, which would explain the gradual sinking into the comatose condition which took place at that time.

The meningeal coverings of the brain over both hemispheres, and especially over the frontal lobes, were covered with the products of inflammation, of a greenish-yellow cast. The dura mater was adherent to the skull in many places, so as to be detached with difficulty. The pia mater also adhered to the surface of the brain. The capillaries and veins upon the surface of the brain were distended and somewhat easily torn. Sections of the brain subsequently disclosed no disease of tissue, so far as the eye could discern. The ventricles contained the usual amount of fluid.

Our diagnosis, then, as made after the autopsy, was, that our patient had a sub-acute, or chronic cerebral meningitis, existing for an indefinite period, complicated with a hemorrhage forty-eight hours before death, the last being the immediate cause of death.

EDWARD PHELPS LYMAN, M.D., NEW PRESTON.

BY ORLANDO BROWN, M.D., WASHINGTON.

Dr. Edward Phelps Lyman was born in Glastonbury, Conn., April 1st, 1821. He studied medicine with his father, the late Dr. Norman Lyman, and graduated from the medical department of Yale College in the year 1842. He immediately commenced the practice of his profession in New Hartford, Conn., where his genial manner and devotion to his profession soon opened for him a promising field of labor. Shortly before this time his brother, the late Dr. Sidney H. Lyman, had settled in New Preston, and, although a skillful physician, his eccentricities of manner had prevented him from fully establishing himself in what was then considered a promising location for a physician. Under the circumstances it was thought best by the father that Edward should join his brother Sidney in New Preston. The wisdom of the father's advice was justified by the result. The genial and pleasing manners of Dr. Edward soon secured for the new firm an extensive practice. This partnership continued until 1855, when it was dissolved, both brothers continuing to practice in New Preston until the death of Dr. Sidney, which occurred in 1878. After the death of his brother the whole of an extensive practice fell into the hands of the subject of this notice, who continued it until his death, which occurred, after an illness of five days, from pneumonia, on the fifth day of April, 1882.

The life of Dr. Lyman was largely spent by the bedside of his patients. He was a close observer of disease and the effect of medicines. This watchfulness and close observation made him an expert in diagnosis, and enabled him to adapt his remedies with peculiar success to the case under treatment. His pleasing manners and untiring devotion to his patients secured their confidence in a marked degree. His laborious practice would not admit of much time for reading, but this loss was made up to him by his wife, who was a constant reader of the medical periodicals of the day, and who would invariably call his attention to any new ideas that were advanced in them. In this manner he kept fully abreast of his more studious medical brethren, and was always ready to avail himself of every advance in medical science. His character as a man was without spot or blemish.

Dr. Lyman was married in 1856 to Sarah A., daughter of Charles Lemmon, Esq., of New Preston, by whom he had one son, Charles P. Lyman, who survives him.

IRA HUTCHINSON, M.D., CROMWELL.

BY ELISHA B. NYE, M.D., MIDDLETOWN.

Ira Hutchinson, M.D., one of a family of nine children of John and Molly Hutchinson, was born in Hebron, Gilead Society, Conn., March 1st, 1800.

His youthful life, like that of so many other men of New England origin who have subsequently filled honorable and important positions in society, was one of labor on the farm, excepting the relatively smaller portion of each year devoted to such educational advantages as the district schools of his day afforded. Later, he was for a time a pupil in Bacon Academy, Colchester, and for a considerable time a school-teacher.

After choosing his profession, he commenced the study of medicine with Dr. Silas Fuller, then of Columbia, subsequently of Hartford, Conn., and after attending the lectures required by law, graduated from the Yale Medical College March 1st, 1825.

After graduation he commenced his medical career in Long Meadow, Mass., but soon after located in Haddam, where he remained in successful practice until 1853, when he removed to Cromwell, where he died. Here, as in his former field, he soon secured a full practice. Gentlemanly in his bearing, he was always gentle in the sick room; yet, having large faith in the resources of our art, he was, in severe cases especially, decidedly efficient, yet judicious, in his practice.

Faithfulness in the discharge of his duties was one of his striking characteristics; indeed, I think no one knowing much of him in this regard will hesitate to concur in the opinion that no physician in the state, while in practice, spent as many hours, night or day, at or near the bedside of his patients as did he; and this, too, whether they were rich or poor, as with him a dictate of duty seemed a motive more potent than mere money-getting.

During his many years' membership of the County Medical Society, he was rarely absent from its meetings, and always manifested a lively interest in them. For one so busily engaged in discharging the practical duties of the profession, he kept himself well posted in its literature. He was more than once a delegate to the American Medical Association; was for several years one of the board of examiners of candidates for degrees at the Yale Medical College; and in 1873 was elected to the presidency of the Connecticut Medical Society.

In his professional deportment he was always honorable, and quite above any airs or arts by which to promote unmanly ends. During his more than half-century of professional life, he enjoyed the confidence and respect of all who knew him; and at his death left a large circle of sincere friends, few, if any, enemies.

He was a man of decided convictions, and outspoken, though never offensively so, in avowing them. He was an early opponent of that incubus upon our political system, American slavery, and an earnest advocate of the cause of temperance. Indeed, every enterprise, having for its object the well-being of society, had in him a judicious but firm friend and advocate.

After having performed more years of faithful service than most physicians, and reached an age which would have justified him in lightening his labors; though suffering from the depression and exhaustion of malarial cachexia, with occasional interruptions, from this cause mainly, he continued practice until the spring of 1881, when, with derangement of the chylopoietic viscera generally, his strength waned slowly but surely, and at last his malady developed a condition of congestive chill, from which he died, without apparent suffering, August 8th, 1881.

He was, at the time of his death, with one exception, the oldest physician in the county, and among the oldest in the State.

Dr. H. was twice married, first to Mrs. Lucinthia Warner, widow of Dr. Andrew F. Warner, his professional predecessor in Haddam; and, some years after her decease, to Miss Laura A. Dart of Middle Haddam.

He was, at the time of his death, and had been for many years, a member, and much of the time an office-bearer, in the Congregational church. During his last and lingering sickness he was enabled to contemplate his approaching end, not only without dismay, but with the comforting and cheering hope of the Christian.

The principle which seems to have governed him in the discharge of all his duties finds, I think, an illustration in the fact that he devoted one-tenth of his income to religious purposes.

Such was the life and such the death of our departed friend. The termination of such a life implies, to the living, a loss; but, although in our future gatherings we shall miss his society and his counsels, our sadness may find mitigation in the thought—consonant with both reason and revelation—that some of those characteristics which made him the exemplary man he was when living, are not annihilated, but have found a more exalted sphere for their exercise, and perhaps enlargement, in the world beyond.

J. HAMILTON LEE, M.D., KILLINGWORTH.

BY J. F. CALEF, M.D., CROMWELL.

Dr. Lee, the only son of Selah and Eleeta Anne (Bushnell) Lee, was born in Madison, Conn., April 10th, 1837.

After a thorough common school education in Madison, he commenced the study of medicine with his brother-in-law, Dr. E. Bidwell, who was then practicing in Haddam. In 1858 he received the degree of Doctor of Medicine from Yale college, and in the spring of the same year commenced the practice of his profession in Greeneville, Conn. Dr. Lee enjoyed a busy professional life at Greeneville until after the commencement of the war, when he was appointed assistant surgeon of the 21st Conn. volunteers, and left for the seat of war Aug. 22d, 1862. Shortly after he was promoted to be brigade surgeon to 3d brigade, 9th army corps. Upon the close of the war he returned to Greeneville for a short time, but finding the field occupied, he determined to try the West. After a few months in Mississippi he returned to Connecticut, and located at Killingworth, where he resided until apoplexy terminated his life on the 8th day of October, 1881.

In 1861 he was married to Mary Frances Clark, of Norwich, Conn., who, with one son, their only child, survives him.

Dr. Lee was a man of high Christian character, generous and untiring in his relations with the poor and suffering.

As a physician and surgeon he was skillful and successful.

JOSHUA BLODGETT, M.D., STAFFORD.

BY C. B. NEWTON, M.D., STAFFORD.

Dr. Blodgett was born in the north part of Stafford, oalled the village, upon one of the ranges of hills which traverse the town, Aug. 10th, 1801, and was one of the twelve children born to Deacon Alden Blodgett, deacon of the Congregational church at Stafford street between forty and fifty years, who was grandson of Joshua Blodgett, the first male child born in Stafford, whose father and three brothers were among the first settlers of the town, coming from Woburn, Mass., and locating at Stafford Hollow.

The doctor came of rugged Puritan stock, of one of the settlers who first broke soil in this town. The name of Blodgett occurs very frequently among its business and official records. He was of scholarly mind, good memory, and good perception. He was a teacher in his youth, teaching school and studying. I am told he was quite proficient in music, leading the choir at the West Stafford church when it stood upon the Hill. He studied with Dr. Gardner, who was located at South Monson, Mass. He attended medical lectures at the Berkshire Medical College, Pittsfield, Mass., during the years 1824 and 1825. Among the professors at the college at that time were Prof. Childs, theory and practice; Prof. DeLameter, obstetrics; Prof. S. W. Williams, medical jurisprudence; Prof. J. R. Cotting, chemistry; Prof. J. W. Smith, anatomy; Prof. Batchelder, surgery.

These are the names which I noticed upon his matriculation tickets, which he had carefully preserved as mementoes of his studentship; also quite a volume of notes of the lectures, which bore the finger-marks of frequent reference. He commenced practice at West Stafford in 1827, which in a few years became quite extensive. He practiced in the same field with Dr. Orson Wood a few years, who afterwards removed to Somers, Conn. He was married in 1829 to Miss Almira Gay, said, at the time, to have been a lady finely educated, and one of the teachers in the Monson Academy, Mass. His second wife was Miss Eliza Gay, both daughters of Capt. David Gay of Stafford, neither of whom lived but a few years. He was afterwards twice married. He

had one son by his first wife, who died recently at the west; he was a lawyer by profession, aged about 38 years. The three children by his second wife are living in Indiana. He had a son by his third wife, who was a daughter of Deacon Joshua W. Eaton of Stafford. This son died in the army. His fourth wife, now living, had five children, but none are living. She was the daughter of Simon Fairman of Stafford.

He was appointed dissertator of the State society in 1834, and appointed Fellow in 1838. He was a member of the Tolland County Medical Society.

Towards his professional brethren in counsel he was independent. His opinions were based always and firmly upon his own study of a case, relying upon his early instructions and his textbooks rather than upon the views of his medical contemporaries. Toward his younger medical friends, whom he met as counsellor, he was just; but his justice was tempered with an exceedingly small amount of mercy.

He never spoiled a young physician with too much flattery and caresses. But we were willing to meet him, and take our chances notwithstanding, because of his solid good judgment and the light he would give us in any case. His opinions were generally accurate and comprehensive.

He could quote with much precision the records of similar cases from the older standard authors and teachers. We loved to meet him because of his good anecdotes. More than once has the weariness of a tedious obstetrical case vanished with his presence and amusing conversation.

During the fifty years of his practice he was able to answer calls, night or day, with but very few interruptions from sickness. He visited the rich and the poor alike, regardless of the weather or his own comfort. During some of his exposures he contracted rheumatism, which was the first real impairment of his health, which, with his advanced age, quite closed his active practice.

During the last year or two of his life his memory completely failed him; his active brain had lost its power, and he lived altogether in the past. Events of fifty years ago were vivid in his mind. He delighted to recall the incidents of his college days and of his early practice. He was proud of his diploma, which he received at Pittsfield, and counted it as one of his treasures. He had a hatred of quackery and bogus doctors, and never re-

sorted to any of their methods of advertising, but depended rather upon skillful work and his actual successes for a good reputation as a physician. His rides were long, many of them, and over hilly, bad roads. He was for a long period recognized as one of the leading physicians of this section of the State.

His manner was practical, and had less regard for appearances than for the duties before him. His favorite remedies were those which were taught him at that early day. I don't think he was ever led astray by new remedies, so-called, giving them undue value, and used them only after they had become accepted by the profession after due trial. As a collector of bills he was not so successful as in his practice. He did not press his claims. He waited for his customers to come to him, and when, after years had elapsed, upon making inquiry after this class of his patients, who never pay their physician, he would ascertain perhaps that the family he had watched over and befriended had either gone where the woodbine twineth, or to some other place unknown.

But fortunately he had patrons of the paying class. After this manner he was embarrassed financially, and during his old age would have been reduced to the most absolute penury, if some of his rich patrons and relatives had not come to his aid. Thus, after a life of toil, which should have placed him far above want, this old veteran physician died poor. During his last years his favorite book was the Bible. His wife showed me manuscripts of considerable volume, apparently written after much study, upon the prophecies. These thoughts were put upon paper after the doctor had retired from the most active part of his life-work. This taste for Bible study had origin in his early education, no doubt. His father was a God-fearing Presbyterian deacon of the old school, whom we may well imagine impressed the Puritan theological lessons upon his young mind so strongly that, like a successful vaccination, its influence did not depart from him even in the dotage of his old age.

He inherited a strong constitution and tenacity of life, dying at the good age of 80 years.

His people were long-lived. His grandfather, who was one of the founders of the First Presbyterian church in Stafford, died at the great age of 95 years: and a sister of the doctor, the wife of the late Capt. Solva Converse, the pioneer manufacturer of Stafford, also died recently at a very advanced age.

His last sickness was a lingering, but painless one. In April, 1881, he fell upon his door-step, striking upon the back of his head. Very soon he was seized with slight clonic spasms. Previous to this fall he was very anæmic and feeble. He had these spasms frequently during the following summer. There was no external wound and no depression of bone. He constantly referred to his injury at each of my visits, forgetting that I had seen him before. There was no inflammation after the concussion. There remained a permanent injury of the brain, perhaps from the presence of small coagula or slight lesion of the base of the brain, which hastened his death.

To the children he was hardly known, but to the old residents the name of Dr. Blodgett is, far and wide, a household word. They remember him as their good helper in hours of peril, when he stood between them and danger, as their faithful physician and friend. Though he is gathered home to his fathers, yet he still lives in their remembrance as a physician who was true to the duties imposed upon him. During the last days of his life his mind was clouded with a merciful coma, meeting death without a pain or a struggle.

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MERIDEN (West), Asa H. Churchill, C. H. S. Davis, N. Nickerson, A. W. Traey, E. M. Child, E. T. Bradstreet, Anna J. Ferris, Geo. D. Ferguson, J. D. Eggleston, C. H. Howland, Edward F. Cornwall.

MILFORD, Hull Allen,* Wm. H. Andrews, E. B. Heady.

NAUGATUCK, A. E. May.

NORTH HAVEN, R. B. Goodyear.

ORANGE, West Haven, J. Martin Aimes, John F. Barnett.

OXFORD, Lewis Barnes.

SEYMOUR, Thomas Stoddard,* S. C. Johnson,* Joshua Keudall.*

SOUTHBURY, A. B. Burritt.*

South Britain, N. C. Baldwin.*

WALLINGFORD, Nehemiah Banks, B. F. Harrison,* H. Davis, J. D. McGaughey, C. H. Atwater.

WATERBURY, G. L. PLATT,* Alfred North, Edward L. Griggs, H. E. Castle, E. W. McDonald, J. J. M. Neville, Walter H. Holmes, Walter L. Barber, C. W. S. Frost, F. P. Esterly.

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* Over sixty years of age.

† P. O. New Haven.

NEW LONDON COUNTY.

E. C. KINNEY, M.D., of Norwich, President.

A. PECK, M.D., of Norwich, Clerk.

Censors—I. G. PORTER, M.D., L. S. PADDOCK, M.D.*County Reporter*—L. S. PADDOCK, M.D.

NEW LONDON, ISAAC G. PORTER,* Robert A. Manwaring,* A. W. Nelson, F. N. Braman, J. G. Stanton.	S. Paddock, CHAS. M. CARLETON, Wm. S. C. Perkins, Patrick Cassidy, E. C. Kiuney, S. L. Sprague, L. B. Almy, A. Peck, W. H. Mason, E. P. Brewer, W. H. Dudley.
FRANKLIN, ASH BEL WOODWARD.*	Greeneville, William Witter, Julian La Pierre.
GRISWOLD, George H. Jennings.	OLD LYME, George W. Harris, E. D. Griffin.
GROTON, Mystic River, John Gray.	EAST LYME, Elisha Munger.
LEBANON, W. P. Barber.	STONINGTON, Charles N. Brayton, George D. Stanton.
MONTVILLE, William M. Burehard	NORTH STONINGTON, J. D. Nelson.
MYSTIC, Mason Mauniug,* Albert T. Chapman.	
Mystic Bridge, E. Frauk Coates, Frank A. Coates.	
NORWICH, Elisha Phinney,* Lewis	

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FAIRFIELD COUNTY.

WM. C. WILE, M.D., of Sandy Hook, President.

F. M. WILSON, M.D., of Bridgeport, Clerk.

Censors—W. A. LOCKWOOD, M.D., C. H. BILL, M.D., G. F. LEWIS, M.D.*County Reporter*—W. A. LOCKWOOD, M.D.,

BRIDGEPORT, ROBERT HUBBARD, Andrew J. Smith, Augustus H. Abernethy, Geo. F. Lewis, Jas. R. Cummings, George L. Porter, Robert Lauder, Francis J. Young, Curtis H. Bill, N. E. Wordiu, G. M. Teeple, Chas. W. Sheffry, F. M. Wilson, T. F. Martiu, W. H. Bunnell, F. B. Downs, B. W. Munson, Mary J. Rising, W. C. Bowers, F. A. Rice, J. D. Bragg, J. W. Wright, A. W. Lyons, S. T. DeLaMater.	Greenfield Hill, M. V. B. Dunham.
BROOKFIELD, A. L. Williams.*	FAIRFIELD, S. M. Garliek.
DANBURY, E. P. Bennett,* James Baldwin,* Wm. C. Beunett, F. P. Clark, A. T. Clason, William F. Lacey, A. E. Adams.	NORWALK, James G. Gregory, W. A. Lockwood, Jno. C. Kendall, Robert Nolau, F. V. Brush, E. C. Clarke, Geo. W. Benedict.
DARIEN, Saml. Sands,* R. L. Bobaunau.	South Norwalk, R. L. Higgins, W. C. Burke, Jr., C. J. Bohannan.
MONROE, D. A. Richardson.	RIDGEFIELD, O. S. Hickok, Wm. S. Todd.
NEW CANAAN, WM. G. BROWN-SON, Willis Cummings.	READING, M. H. Wakeman.
BETHEL, A. E. Barber.	Southport, C. H. Osborne.
	STRATFORD, Edwin D. Nooney.
	STAMFORD, H. P. Geib, W. H. Trowbridge, Heury Hungerford, A. M. Hurlburt.
	STEPNEY, Seth Hill.
	WESTON, F. Gorham.
	WESTPORT, George B. Bouton, F. Powers.
	HUNTINGTON, Gould A. Shelton.
	Sandy Hook, Wm. C. Wile.
	WILTON, S. H. Huntington, A. B. Gorham.

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* Over sixty years of age.

WINDHAM COUNTY.

JOHN WITTER, M.D., of Putnam, President.

R. ROBINSON, M.D., of Danielsonville, Clerk.

Censors.

S. HUTCHINS, M.D., T. M. HILLS, M.D., LOWELL HOLBROOK, M.D.

County Reporter—C. J. FOX, M.D.

ASHFORD, John H. Simmons.*	ter, John B. Kent, Omer LaRue,
HAMPTON, C. Gardiner.	F. X. Barolet.
KILLINGLY, Asbael E. Darling,	THOMPSON, LOWELL HOL-
Henry F. Hammond.	BROOK, E. T. Morse.
West Killingly, Samuel Hutchins,*	GROSVENORDALE, A. A. Latour.
R. Robinson, Thomas Graves.	East Woodstock, Frank N. Olin.
East Killingly, Edwin A. Hill.	West Woodstock, A. S. Leonard.
PLAINFIELD, Moosup, William A.	WINDHAM, E. Huntington, Casper
Lewis.	Barstow.
Central Village, Chas. H. Rogers,*	Willimantie, Fred. Rogers, T. Mor-
E. H. Davis.	ton Hills, O. B. Griggs, C. J. Fox,
POMFRET, Frederiek G. Sawtelle.	Farnam O. Bennett, John Cotton.
PUTNAM, H. W. Hough,* John Wit-	—29

LITCHFIELD COUNTY.

W. S. MUNGER, M.D., of Watertown, President.

W. J. BEACH, M.D., of Litchfield, Vice-President.

J. J. NEWCOMB, M.D., of Litchfield, Clerk.

Censors—H. W. BUEL, M.D., J. W. BIDWELL, M.D., L. H. WOOD, M.D.*County Reporter*—B. S. THOMPSON, M.D., Salisbury.

LITCHFIELD, H. W. BUEL,* H. E.	ROXBURY, Myron Downs.*
Gates, W. J. Beach, J. J. Newcomb.	SALISBURY, B. S. Thompson.
Northfield, C. L. Blake.	Lakeville, W. Bissell, R. P. Knight.
CANAAN, C. W. Camp.	SHARON, William W. Knight.
West Cornwall, Edward Sanford.	Woleottville, T. S. Hanchett, L. H.
MORRIS, Garry H. Miner,* C. H.	Wood.
Gilbert.	WARREN, John A. Derriekson.
Gaylordsville, Charles F. Couch.	WASHINGTON, Orlando Brown.
GOSHEN, J. H. North.	New Preston, R. A. Marcy.
HARWINTON, W. P. Swett.	WATERTOWN, W. S. Munger.
NEW HARTFORD, Jerry Burwell.	WINCHESTER, West Winsted, James
NORFOLK, Wm. W. Weleh,* J. H.	Weleh,* John W. Bidwell, F. E.
Stevens.	Barrows.
THOMASTON, Wm. Woodruff,* Ralph	WOODBURY, Harmon W. Shove.
S. Goodwin, F. M. Cannon.	—36

* Over sixty years of age.

MIDDLESEX COUNTY.

MINER C. HAZEN, M.D., of Haddam, President.

J. FRANK CALEF, M.D., of Cromwell, Clerk.

Censors—S. W. TURNER, M.D., GEO. W. BURKE, M.D., E. B. NYE, M.D.

County Reporter—R. W. MATTHEWSON, M.D., Durham.

MIDDLETOWN, Elisha B. Nye,* Geo. W. Burke, Rufus Baker,* F. D. Edgerton, Abraham M. Shew, Jos. W. Alsop, Jr., Daniel A. Cleaveland, John Morgan, Jas. Olmstead, Wm. E. Fisher, C. E. Stanley, P. V. Burnet, J. N. Kenister.	DURHAM, R. W. Mathewson,* ESSEX, Alanson A. Hough,† Charles H. Hubbard.
CHATHAM, Middle Haddam, Albert B. Worthington.	HADDAM, Miner C. Hazen, Selden C. Noyes.
East Hampton, Albert Field.	Moodus, A. W. Bell.
CHESTER, Sylvester W. Turner.	OLD SAYBROOK, J. H. Granniss.
CROMWELL, Winthrop B. Hallock, J. Frank Calef.	PORTLAND, C. A. Sears, Cornelius E. Hammond, S. P. Ladd.
	SAYBROOK, Deep River, Edwin Bidwell.
	WESTBROOK, G. C. H. Gilbert, T. B. Bloomfield.

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TOLLAND COUNTY.

C. B. NEWTON, M.D., of Stafford Springs, President.

GILBERT H. PRESTON, M.D., of Tolland, Clerk.

Censors—G. H. PRESTON, M.D., WM. N. CLARK, M.D., S. G. RISLEY, M.D.

County Reporter—S. G. RISLEY, M.D.

TOLLAND, G. H. Preston.*	Stafford Springs, C. B. Newton, F. L. Smith.
BOLTON, CHAS. F. SUMNER.*	UNION, Wm. Howard.
COVENTRY, Maurice B. Bennett.	VERNON, Vernon Depot, A. R. GOODRICH.*
South Coventry, Henry S. Dean, E. P. Flint.	Rockville, Steph'n G. Risley,* Francis L. Dickinson,* Frederiek Gilnack, E. K. Leonard.
ELLINGTON, J. A. Warren.	WILLINGTON, Wm. L. Kelsey. —16
MANSFIELD DEPOT, F. E. Johnson.	
STAFFORD, Wm. N. Clark.*	

* Over sixty years of age.

ALPHABETICAL LIST
OF THE
MEMBERS OF THE CONNECTICUT MEDICAL SOCIETY,

With Date and Place of Graduation, and Post-office Address.

Names.	Place and Date of Graduation.	P. O. Address.
Abernethy, Augustus II.,	Yale, 1864,	Bridgeport.
Adams, A. E.,	Coll. Phys. and Surg., 1880,	Danbury.
Allen, H. C.,	Univ. N. Y., 1879,	Broadbrook.
Allen, Francis F.,	Yale, 1825,	North Granby.
Allen, Hull,	Univ. N. Y., 1821,	Milford.
Alling, W. G.,	Yale, 1870,	New Haven.
Almy, L. B.,	Bellevue, N. Y., 1876,	Norwich.
Alsop, J. W., Jr.,	Univ. N. Y., 1864,	Middletown.
Atwater, C. H.,	Coll. Phys. and Surg., 1871,	Wallingford.
Andrews, Wm. H.,	Bellevue, N. Y., 1873,	Milford.
Augur, Geo. J.,	Yale, 1879,	New Haven.
Avery, Geo. W.,	Yale, 1861,	Hartford.
Axtelle, J. F.,	L. I. Hosp. Coll., 1877.	Hartford.
Ayres, W. O.,	Yale, 1854,	New Haven.
Bacon, Francis,	Yale, 1853,	New Haven.
Bacon, Wm. T.,	Univ. N. Y., 1871,	Hartford.
Baker, Rufus,	Columbia Coll., D. C., 1844,	Middletown.
Baker, Scott R.,	Yale, 1879,	Ansonia.
Baldwin, James,	Yale, 1825,	Danbury.
Baldwin, N. C.,	Yale, 1837,	South Britain.
Banks, Nehemiah,	Yale, 1844,	Wallingford.
Barber, W. L.,	Bellevue, 1873,	Waterbury.
Barber, W. P.,	Dartmouth, N. H., 1870.	Lebanon.
Barber, A. E.,	Berkshire, Mass., 1854.	Bethel.
Barker, J. W.,	Yale, 1860,	Westville.
Barnes, Lewis,	Univ. Buffalo, N. Y., 1851,	Oxford.
Barnett, J. F.,	Yale, 1869,	West Haven.
Barolet, F. X.,	Victoria, Montreal, 1860,	Putnam.
Barrows, A. W.,	Yale, 1841,	Hartford.
Barrows, F. E.,	Univ. N. Y., 1876,	West Winsted
Barstow, Caspar,	Burlington, Vt., 1878,	Windham.
Bartlett, W. R.,	Yale, 1871,	New Haven.
Beach, W. J.,	Coll. Phys. and Surg., 1867,	Litchfield.
Beardsley, A.,	Berkshire, 1834,	Birmingham.
Beardsley, G. L.,	Bellevue, N. Y., 1873,	Birmingham.
Beekwith, F. E.,	Coll. Phys. and Surg., 1871,	New Haven.

Name.	Place and Date of Graduation.	P. O. Address.
Bell, A. W.,	Univ. N. Y., 1874,	Moodus.
Bell, Newton S.,	Burlington, Vt., 1864,	Windsor.
Belosa, F.,	Yale, 1872,	New Haven.
Benedict, Geo. W.,	Coll. Phys. and Surg., 1879,	Norwalk.
Bennett, E. P.,	Berkshire, 1826,	Danbury.
Bennett, F. O.,	Berkshire, 1859,	Willimantic.
Bennett, M. B.,	Berkshire, 1863,	Coventry.
Bennett, W. C.,	Coll. Phys. and Surg., 1860,	Danbury.
Bidwell, Edwin,	Yale, 1847,	Deep River.
Bidwell, John W.,	Berkshire, 1846,	West Winsted.
Bill, Curtis H.,	Univ. N. Y., 1859,	Bridgeport.
Bishop, E. H.,	Yale, 1829,	New Haven.
Bishop, T. H.,	Yale, 1860,	New Haven.
Bissell, E. L.,	Yale, 1860,	New Haven.
Bissell, William,	Yale, 1856,	Lakeville.
Blake, C. L.,	Yale, 1875,	Northfield.
Bloomfield, T. B.,	Coll. Phys. and Surg., 1876,	Westbrook.
Bohannan, R. L.,	Univ. N. Y., 1874,	Darien.
Bohannan, Charles J.,	Univ. N. Y., 1878,	South Norwalk.
Bouton, Geo. B.,	Yale, 1856,	Westport.
Bowen, W. C.,	Coll. Phys. and Surg., 1877,	Bridgeport.
Bradstreet, E. T.,	Coll. Phys. and Surg., 1877,	Meriden.
Bradley, W. L.,	Yale, 1864,	New Haven.
Bragg, James D.,	Albany, 1867,	Bridgeport.
Braman, F. N.,	Bellevue, 1866,	New London.
Brandagee, E.,	Yale, 1838,	Berlin.
Brayton, Charles N.,	Coll. Phys. and Surg., 1873,	Stonington.
Brewer, E. P.,	Dartmouth, 1878,	Norwich.
Bromley, Daniel T.,	Yale, 1867,	Hartford.
Brouson, Henry,	Yale, 1827,	New Haven.
Brown, Francis W.,	Univ. N. Y., 1877,	Woodbury.
Brown, Orlando,	Yale, 1851,	Washington.
Brownson, Wm. G.,	Coll. Phys. and Surg., 1863,	New Canaan.
Brush, F. V.,	Coll. Phys. and Surg., 1867,	Norwalk.
Buel, Henry W.,	Coll. Phys. and Surg., 1847,	Litchfield.
Buel, Virgil,	L. I. Coll. Hosp., 1871,	Harwinton.
Bugbee, L. F.,	Coll. Phys. and Surg., 1866,	Willimantic.
Bull, J. N.,	Coll. Phys. and Surg., 1878,	Plainville.
Bunce, H. C.,	Yale, 1850,	Glastonbury.
Bunnell, W. H.,	Coll. Phys. and Surg., 1879,	Bridgeport.
Burchard, Wm. C.,	Georgetown, D. C., 1866,	Montville.
Burke, Geo. W.,	Yale, 1843,	Middletown.
Burke, Wm. C., Jr.,	L. I. Coll. Hosp., 1875,	South Norwalk.
Burnap, S. R.,	Coll. Phys. and Surg., 1862,	Windsor Locks.
Buruett, P. V.,	Univ. N. Y., 1876,	Middletown.
Burritt, A. B.,	Yale, 1832,	Southbury.
Burwell, Jerry,	Berkshire, 1839,	New Hartford.
Bush, Geo. M.,	Yale, 1881,	New Haven.
Butler, John S.,	Jefferson, Pa., 1828,	Hartford.
Calef, J. F.,	Yale, 1880,	Crownwell.
Camp, C. W.,	Univ. N. Y., 1874,	Canaan.
Campbell, Jas., Jr.,	Univ. Vermont,	Hartford.
Cannon, F. M.,	Univ. N. Y., 1867,	Thomaston.
Carleton, Charles M.,	Harvard, 1861,	Norwich.
Carmalt, W. H.,	Coll. Phys. and Surg., 1861,	New Haven.
Carrington, Charles,	Coll. Phys. and Surg., 1848,	Farmington.
Carrington, Henry A.,	Harvard, 1848,	New Haven.

Name.	Place and Date of Graduation.	P. O. Address.
Cassidy, Patrick,	Univ. Vermont,	Norwich.
Castle, H. E.,	Yale, 1870,	Waterbury.
Chamberlain, C. W.,	Coll. Phys. and Surg., 1871,	Hartford.
Chamberlin, M. N.,	Yale, 1866,	Cheshire.
Chapman, A. F.,	Coll. Phys. and Surg., 1864,	Mystic.
Chapman, S. W.,	Coll. Phys. and Surg., 1869,	New Haven.
Child, E. M.,	Univ. N. Y., 1877,	Meriden.
Childs, Seth L.,	Woodstock, Vt., 1835,	East Hartford.
Churehill, Asa II.,	Yale, 1857,	Meriden.
Clarke, E. C.,	Univ. Vermont, 1868,	Norwalk.
Clark, F. P.,	Coll. Phys. and Surg., 1876,	Danbury.
Clark, Wm. N.,	Yale, 1830,	Stafford.
Clason, A. F.,	Univ. N. Y., 1875,	Danbury.
Clary, George,	Yale, 1857,	New Britain.
Cleaveland, D. A.,	Bowdoin, Me., 1856,	Middletown.
Coates, E. F.,	Yale, 1863,	Mystic Bridge.
Coates, Frank A.,	Coll. Phys. and Surg., 1873,	Mystic Bridge.
Coholan, M. J.,	Univ. N. Y., 1865,	New Britain.
Comings, B. N.,	Castleton, Vt., 1845,	New Britain.
Coogan, Joseph A.,	Bellevue, N. Y., 1876,	Hartford.
Cornwall, E. T.,	Coll. Phys. and Surg., 1881,	Meriden.
Cotton, John,	Harvard,	Willimantie.
Couch, Charles F.,	Berkshire, 1863,	Gaylordsville.
Crary, David,	Castleton, 1834,	Hartford.
Crary, David, Jr.,	Yale, 1869,	Hartford.
Cremin, M. A.,	Coll. Phys. and Surg., 1874,	New Haven.
Cressy, Noah,	Berkshire, 1862,	Hartford.
Crossfield, F. S.,	Bellevue, 1878,	Hartford.
Crothers, T. D.,	Albany, 1875,	Hartford.
Cummings, Jas. R.,	Coll. Phys. and Surg., 1862,	Bridgeport.
Cummings, Willis,	Univ. N. Y., 1882,	New Canaan.
Daggett, David S.,	Yale, 1843,	New Haven.
Darling, A. E.,	Harvard, 1872,	Killingly.
Davis, C. H. S.,	Univ. N. Y., 1865,	Meriden.
Davis, E. H.,	Burlington, N. J., 1872,	Central Village.
Davis, G. P.,	Coll. Phys. and Surg., 1869,	Hartford.
Davis, H.,	Yale, 1855,	Wallingford.
Day, L. T.,	Yale, 1880,	New Haven.
DeForrest, Wm. B.,	Yale, 1840,	New Haven.
Dean, H. S.,	Jefferson, 1852,	South Coventry.
DeLamater, S. F.,	Albany, 1880,	Bridgeport.
Deming, Ralph,	Yale, 1857,	Sharon.
Deming, William,	Yale, 1856,	Hartford.
Derriekson, John R.,	Jefferson, 1850,	Warren.
Dibble, Frederiek L.,	Yale, 1858,	New Haven.
Dickinson, F. S.,	Yale, 1840,	Rockville.
Doherty, J. J. S.,	Univ. N. Y., 1874,	New Haven.
Doutteit, Heury,	Yale, 1879,	New Haven.
Downs, F. B.,	Coll. Phys. and Surg., 1878,	Bridgeport.
Downs, Myron,	Yale, 1838,	Roxbury.
Dubois, Henry A.,	Coll. Phys. and Surg., 1830,	New Haven.
Dudley, W. H.,	Univ. N. Y., 1882,	Norwich.
Dunham, M. V. B.,	Harvard, 1867,	Greenfield Hill.
Dwycr, John,	Univ. N. Y., 1871,	Hartford.
Dwight, Edward,	Yale, 1876,	New Haven.
Edgerton, Francis D.,	Coll. Phys. and Surg., 1864,	Middletown.

Name.	Place and Date of Graduation.	P. O. Address.
Eggleston, J. D.,	Coll. Phys. and Snrg., 1879,	Meriden.
Elliot, Gnstave,	Coll. Phys. and Snrg., 1880,	New Haven.
Ellsworth, P. W.,	Coll. Phys. and Snrg., 1839,	Hartford.
Ensign, R. E.,	Albany, 1858,	Poquonnock.
Esterly, F. P.,	Univ. Mich., 1872,	Waterbury.
Farnham, Geo. B.,	Yale, 1869,	New Haven.
Ferguson, Geo. D.,	Univ. N. Y., 1879,	Meriden.
Ferris, Anna J.,	Women's Med. Coll. Pa., '74,	Meriden.
Field, Albert,	L. I. Coll. Hosp., 1867,	East Hampton.
Finch, Geo. T.,	Bellevue, N. Y., 1877,	Thompsonville.
Fisher, Wm. E.,	Univ. Pa., 1876,	Middletown.
Fiske, J. P.,	Univ. N. Y., 1875,	Southington.
Fiske, Mareus,	Univ. Pa., 1842,	Warehouse Point.
Fleischner, Henry,	Yale, 1878,	New Haven.
Flint, E. P.,	Yale, 1879,	South Coventry.
Foster, J. F. C.,	Yale, 1875,	New Haven.
Fox, Charles J.,	Univ. N. Y., 1876,	Willimantic.
French, John M.,	Univ. Vermont, 1877,	Simsbury.
Froelich, C. E.,	Copenhagen, 1870,	Hartford.
Frost, C. W. S.,	Coll. Phys. and Snrg., 1880,	Waterbury.
Fuller, Horace S.,	Coll. Phys. and Surg., 1865,	Hartford.
Gardner, C.,	Jefferson, 1880,	Hampton.
Garlick, S. M.,	Harvard, 1877,	Fairfield.
Gates, H. E.,	L. I. Coll. Hosp., 1861,	Litchfield.
Gaylord, C. W.,	Yale, 1872,	Branford.
Geib, H. P.,	Bellevue, 1869,	Stamford.
Gibbons, T. P.,	Jefferson, 1857,	New Haven.
Gilbert, C. H.,	Univ. N. Y., 1880,	Morris.
Gilbert, G. C. H.,	Yale, 1844,	Westbrook.
Gilbert, S. D.,	Yale, 1871,	Fair Haven.
Gilnack, F.,	Coll. Phys. and Snrg., 1867,	Rockville.
Gladwin, Ellen F. II.,	Women's Med. Coll., N. Y.	Infirmary, 1872.
Goodrich, A. R.,	Berkshire, 1846,	Hartford.
Goodwin, R. S.,	Coll. Phys. and Surg., 1866,	Vernon.
Goodyear, R. B.,	Yale, 1868,	Thomaston.
Gorham, A. B.,	Yale, 1879,	North Haven.
Gorham, F.,	Yale, 1876,	Wilton.
Grannis, John H.,	Yale, 1868,	Weston.
Graves, Thomas,	Harvard, 1870,	Old Saybrook.
Graves, Wm. B.,	Univ. N. Y., 1880,	West Killingly.
Gray, Henry,	Datmonth, 1847,	New Haven.
Gray, John,	Yale, 1863,	Bloomfield.
Gregory, James G.,	Coll. Phys. and Surg., 1868,	Mystic River.
Griffin, E. D.,	Coll. Phys. and Surg., 1865,	Norwalk.
Griggs, E. L.,	L. I. Coll. Hosp., 1864,	Old Lyme.
Griggs, O. B.,	Univ. N. Y., 1847,	Waterbury.
Griswold, J. E.,	Univ. N. Y., 1878,	Willimantic.
Griswold, R. M.,	Univ. N. Y., 1875,	Glastonbury.
Griswold, R. W.,	Coll. Phys. and Surg., 1854,	North Manchester.
Halleck, Winthrop B.,	L. I. Coll. Hosp., 1864,	Rocky Hill.
Hammond, C. E.,	Univ. N. Y.,	Cromwell.
Hammond, Henry F.,	Harvard, 1866,	Portland.
Hanchett, T. S.,	Bellevue, N. Y., 1864,	Killingly.
Harris, G. W.,	Coll. Phys. and Surg., 1857,	Wolcottville.
		Old Lyme.

Name.	Place and Date of Graduation.	P. O. Address.
Harrison, B. F.,	Yale, 1836,	Wallingford.
Hart, S. W.,	Yale, 1855,	New Britain.
Hastings, P. M.,	Coll. Phys. and Surg., 1842,	Hartford.
Hawks, Wm. W.,	Yale, 1881,	New Haven.
Hawley, George B.,	Yale, 1836,	Hartford.
Hazen, M. C.,	Univ. Michigau, 1855,	Haddam.
Heady, E. B.,	Yale, 1872,	Milford.
Heaney, A. G.,	L. I. Med. Hosp. Coll., 1876,	Thomaston.
Hiekok, O. S.,	Berkshire, 1854,	Ridgefield.
Higgins, R. L.,	Bellevue, 1867,	South Norwalk.
Hill, E. A.,	Harvard, 1850,	East Killingly.
Hills, T. M.,	Yale, 1863,	Willimantic.
Hill, Seth,	Yale, 1866,	Stepney.
Holmes, Wm. C.,	Coll. Phys. and Surg., 1880,	Branford.
Holmes, W. H.,	Harvard, 1879,	Waterbury.
Holbrook, Lowell,	Univ. N. Y., 1848,	Thompson.
Horton, W. W.,	Univ. N. Y., 1878,	Unionville.
Hotchkiss, W. H.,	Yale, 1872,	New Haven.
Hough, A. H.	Yale, 1832,	Essex.
Hough, H. W.,	Yale, 1836,	Putnam.
Howard, Wm.,	Yale, 1875,	Union.
Howe, H. G.,	Coll. Phys. and Surg., 1875,	Hartford.
Howland, C. H.,	Yale, 1880,	Meriden.
Hubbard, C. H.,	Yale, 1860,	Essex.
Hubbard, Robert,	Yale, 1851.	Bridgeport.
Hubbard, Stephen G.,	Dartmouth, 1843,	New Haven.
Hudsou, Wm. M.,	Jefferson, 1855,	Hartford.
Hungerford, Henry,	Coll. Phys. and Surg., 1880,	Stamford.
Hunt, E. K.,	Jefferson, 1828,	Hartford.
Huntington, E.,	Dartmouth, 1847,	Windham.
Huntington, S. H.,	Yale, 1876,	Wilton.
Hurlburt, A. M.,	Coll. Phys. and Surg., 1879,	Stamford.
Hurlburt, G. A.,	Coll. Phys. and Surg., 1865,	Buckingham.
Hutebins, S.,	Harvard, 1841,	West Killingly.
Ives, Levi,	Yale, 1838,	New Haven.
Ives, Robert S.,	Coll. Phys. and Surg., 1866,	New Haven.
Jarvis, Geo. C.,	Univ. N. Y., 1861,	Hartford.
Jeuniugs, G. H.,	L. I. Coll. Hosp., 1875,	Griswold.
Jewett, P. A.,	Yale, 1839,	New Haven.
Jewett, T. B.,	Yale, 1879,	Birmingham.
Johnson, M. M.,	Univ. N. Y., 1877,	Hartford.
Johnsou, S. C.,	Conn. Med. Soc., 1825.	Seymour.
Johnson, F. E.,	Univ. N. Y., 1879,	Mansfield Depot.
Judson, Walter,	Coll. Phys. and Surg., 1870,	New Haven.
Judson, W. H.,	Jefferson, 1878,	Wauregan.
Kelsey, Wm. S.,	Jefferson, 1876,	Willington.
Kendall, John C.,	Coll. Phys. and Surg., 1875,	Norwalk.
Kendall, Joshua C.,	Coll. Phys. and Surg., 1875,	Seymour.
Kenister, J. N.,	Harvard, 1872,	Middletown.
Kent, J. B.,	Harvard, 1869.	Putnam.
Kinney, E. C.,	N. Y. Med. Coll., 1858,	Norwich.
Knight, R. P.,	Coll. Phys. and Surg., 1880.	Lakeville.
Knight, W. W.,	Berkshire, 1856.	Sharon.
Knight, W. W.,	Univ. N. Y., 1876,	Hartford.

Name.	Place and Date of Graduation.	P. O. Address.
Lacey, Wm. F.,	Yale, 1844,	Danbury.
Ladd, S. P.,	Univ. N. Y., 1879,	Portland.
Lauder, Robert,	Yale, 1871,	Bridgeport.
LaPierre, Julian,	Bellevue, 1871,	Greenville.
LaRue, Omer,	Victoria, Montreal, 1871,	Putnam.
Latour, A. A.,	Victoria Coll., Montreal,	Grosvenordale.
Leighton, A. W.,	Yale, 1879,	New Haven.
Leavenworth, D. C.,	Yale, 1865,	New Haven.
Leonard, A. S.,	Coll. Phys. and Surg., 1866,	Woodstock Valley.
Leonard, E. K.,	Conn. Med. Soc., 1866,	Rockville.
Lewis, B. S.,	Harvard, 1875,	New Haven.
Lewis, G. F.,	Yale, 1856,	Bridgeport.
Lewis, G. F.,	Yale, 1864,	Collinsville.
Lewis, John B.,	Univ. N. Y., 1853,	Hartford.
Lewis, Wm. A.,	Harvard, 1851,	Moosup.
Lewis, Wm. J.,	Coll. Phys. and Surg., 1878,	Hartford.
Lindsley, C. A.,	Yale, 1852,	New Haven.
Lindsley, C. P.,	Yale, 1878,	New Haven.
Lines, J. F.,	Yale, 1862,	New Haven.
Lockwood, W. A.,	Coll. Phys. and Surg., 1864,	Norwalk.
Lyon, E. B.,	Berkshire, 1862,	New Britain.
Lyon, Irving W.,	Coll. Phys. and Snrg., 1863,	Hartford.
Lyons, A. W.	Colnmbus, 1876,	Bridgeport.
Mailhouse, Max,	Yale, 1878,	New Haven.
Manning, Mason,	Yale, 1818,	Mystic.
Manwaring, R. A.,	Yale, 1833,	New London.
Marcy, R. A.,	Univ. N. Y., 1882,	New Preston.
Martin, T. F.,	Univ. N. Y.,	Bridgeport.
Mason, J. K.,	Harvard, 1861,	Suffield.
Mason, W. H.,	Buffalo, 1859,	Norwich.
Mather, Wm. H.,	Univ. N. Y.,	Suffield.
Mathewson, R. W.,	Coll. Phys. and Surg., 1835,	Durham.
May, A. E.,	Univ. Vermont, 1879,	Naugatuck.
Mayer, Nathan,	Cincinnati, 1857,	Hartford.
McGaughey, J. D.,	Jefferson, 1870,	Wallingford.
McIntosh, L. W.,	Berkshire,	East Hartford.
McKnight, E. J.,	Coll. Phys. and Surg., 1879,	East Hartford.
McDonald, E. W.,	Univ. N. Y., 1871,	Waterbury.
Mead, E. H.,	Univ. Michigan, 1878,	Berlin.
Miller, W. S.,	Yale, 1879,	South Britain.
Miner, G. H.,	Yale, 1824,	Morris.
Morgan, John,	Yale, 1869,	Middletown.
Morgan, Wm. D.,	Coll. Phys. and Snrg., 1877,	Hartford.
Morgan, W. S.,	Yale, 1855,	Watertown.
Morse, E. T.,	Burlington, 1877,	Thompson.
Munger, Elisha,	Yale, 1875,	East Lyme.
Munger, W. S.,	Yale, 1855,	Watertown.
Mnson, B. W.,	Yale, 1869,	Bridgeport.
Nelson, J. D.,	Coll. Phys. and Surg., 1875,	North Stonington.
Nelson, A. W.,	Harvard, 1861,	New London.
Newcomb, J. J.,	Yale, 1875,	Litchfield.
Newton, C. B.,	Yale, 1851,	Stafford Springs.
Newton, S. B.,	Berkshire, 1854,	East Hartford.
Neville, J. J. M.,	Coll. Phys. and Snrg., 1876,	Waterbury.
Nickerson, N.,	N. Y. Med. Coll., 1857,	Meriden.
Nicoll, John,	Yale, 1854,	New Haven.

Name.	Place and Date of Graduation.	P. O. Address.
Nolan, Robert,	Univ. Vermont, 1877,	Norwalk.
Nooney, E. D.,	Coll. Phys. and Surg., 1871,	Stratford.
North, Alfred,	Coll. Phys. and Surg., 1861,	Waterbury.
North, J. H.,	L. I. Coll. Hosp., 1873,	Goshen.
Noyes, S. W.,	Univ. Pa., 1868,	Haddam.
Nyc, Elisha B.,	Yale, 1838,	Middletown.
Oakes, H. A.,	Coll. Phys. and Surg., 1878,	New Haven.
O'Connor, M. C.,	Coll. Phys. and Surg., 1873,	New Haven.
O'Flaherty, John,	Albany, 1864,	Hartford.
Olin, Frank H.,	Univ. Michigan, 1881,	East Woodstock.
Olmstead, John,	Yale, 1874,	Middletown.
Osborne, C. H.,	Yale, 1876,	Southport.
O'Sullivan, T. J.,	Univ. N. Y., 1874,	Birmingham.
Packard, Geo. B.,	Univ. Vermont, 1874,	Hartford.
Paddock, Lewis S.,	Univ. N. Y., 1854,	Norwich.
Page, C. W.,	Harvard, 1870,	Hartford.
Park, Charles, E.,	Yale, 1881,	New Haven.
Parker, J. N.,	Yale, 1867,	South Manchester.
Parmele, Geo. W.,	L. I. Coll. Hosp., 1869,	Hartford.
Parsons, E. F.,	Coll. Phys. and Surg., 1858,	Thompsonville.
Peck, A.,	Univ. N. Y., 1875,	Norwich.
Perkins, W. S. C.,	Coll. Phys. and Surg., 1860,	Norwich.
Phelps, J. W.,	Castleton, Vt., 1846,	Wolcottville.
Phinney, E.,	Yale, 1835,	Norwich.
Pierpont, Henry,	Yale, 1854,	New Haven.
Pinney, Chas. H.,	Coll. Phys. and Surg., 1853,	Derby.
Platt, G. L.,	Yale, 1838,	Waterbury.
Porter, George L.,	Jefferson, 1862,	Bridgeport.
Porter, Isaac G.,	Univ. Pa., 1833,	New London.
Powers, F.,	Coll. Phys. and Surg., 1870,	Westport.
Preston, G. H.,	Castleton, Vt., 1844,	Tolland.
Richardson, D. A.,	Yale, 1880,	Monroe.
Rice, F. A.,	Bellevue, 1874,	Bridgeport.
Rising, Mary J.,	Univ. Michigan, 1876,	Bridgeport.
Rising, H. M.,	Yale, 1868,	South Glastonbury.
Risley, S. G.,	Univ. N. Y., 1846,	Rockville.
Roberts, G. R.,	Coll. Phys. and Surg., 1878,	Collinsville.
Robinson, R.,	L. I. Coll. Hosp., 1869,	Danielsonville.
Rockwell, S. W.,	Yale, 1855,	East Windsor Hill.
Rogers, Charles H.,	Yale, 1847,	Central Village.
Rogers, Fred.,	Univ. N. Y., 1863,	Willimantic.
Ruickoldt, A.,	Univ. Jena, Austria, 1865,	New Haven.
Russell, Gurdon W.,	Yale, 1837,	Hartford.
Russell, Wm. S.,	Yale, 1880,	New Haven.
Russell, T. H.,	Yale, 1875,	New Haven.
Sanford, Edward,	N. Y. Med. Coll., 1859,	West Cornwall.
Sanford, George W.,	Berkshire, 1836,	Tariffville.
Sanford, Leonard J.,	Jefferson, 1854,	New Haven.
Sawtelle, Frederick G.,	L. I. Coll. Hosp., 1880,	Pomfret.
Sears, C. A.,	Univ. N. Y., 1862,	Portland.
Sheffrey, C. W.,	Yale, 1874,	Bridgeport.
Shelton, Gould A.,	Yale, 1869,	Huntington.
Shepard, George R.,	Yale, 1866,	Hartford.
Shew, A. M.,	Jefferson, 1864,	Middletown.

Name.	Place and Date of Graduation.	P. O. Address.
Shove, H. W.,	Yale, 1853,	Woodbury.
Simmons, J. H.,	Univ. N. Y., 1863,	Ashford.
Smith, A. J.,	Coll. Phys. and Surg., 1863,	Bridgeport.
Smith, H. B.,	Yale, 1876,	New Haven.
Smith, I. S.,	Yale, 1867,	New Haven.
Smith, F. S.,	Univ. N. Y., 1875,	Stafford Springs.
Sprague, S. L.,	Harvard, 1850,	Norwich.
Stanley, C. E.,	Univ. Pa., 1876,	Middletown.
Stanton, Geo. D.,	Bellevue, 1865,	Stonington.
Stanton, J. G.,	Bavaria, 1873,	New London.
Steadman, G. W.,	Bellevue, N. Y., 1875,	Southington.
Stearns, Henry P.,	Yale, 1855,	Hartford.
Stetson, J. E.,	Yale, 1881,	New Haven.
Steven, J. A.,	Univ. N. Y., 1872,	Hartford.
Stevens, J. H.,	Coll. Phys. and Surg., 1852,	Norfolk.
St. John, S. B.,	Coll. Phys. and Surg., 1870,	Hartford.
Stoddard, Thomas,	Yale, 1836,	Seymour.
Stone, Geo. S.,	Coll. Phys. and Surg., 1865,	New Britain.
Storrs, M.,	Yale, 1853,	Hartford.
Strickland, R. S.,	Albany, 1839,	Enfield.
Sumner, C. F.,	Yale, 1854,	Bolton.
Snrridge, Charles G.,	Yale, 1879,	New Haven.
Swett, W. P.,	Univ. Vermont, 1876,	Harwinton.
Swasey, E. P.,	Coll. Phys. and Surg., 1869,	New Britain.
Swift, Edwin E.,	Univ. N. Y., 1880,	Hamden.
Swift, E. D.,	Univ. N. Y., 1849,	Hamden.
Talbot, R. B.,	Coll. Phys. and Surg., 1877,	Hartford.
Talcott, Alvan,	Yale, 1831,	Gnifford.
Teepie, G. M.,	Albany, 1849,	Bridgeport.
Thatcher, James K.,	Yale, 1879,	New Haven.
Thomson, B. S.,	Bellevue, N. Y., 1867,	Salisbury.
Thomson, C. S.,	Yale, 1822,	Fair Haven.
Thomson, W. H.,	Yale, 1862,	Fair Haven.
Thomson, E. L.,	Yale, 1874,	New Haven.
Tiffany, R. H.,	Castleton, Vt., 1837,	Hartford.
Tinker, W. R.,	Univ. N. Y., 1880,	South Manchester.
Todd, Wm. S.,	Coll. Phys. and Surg., 1869,	Ridgefield.
Townsend, T. B.,	Yale, 1858,	New Haven.
Tracy, A. W.,	McGill Univ., Canada, 1873,	Meriden.
Treadwell, O. F.,	Yale, 1865,	New Haven.
Tremaine, W. H.,	Berkshire, 1838,	Hartford.
Trigg, H. S.,	Univ. Vermont, 1881,	Hartford.
Trowbridge, W. H.,	Yale, 1855,	North Stamford.
Turner, Sylvester,	Yale, 1842,	Chester.
Tyler, David A.,	Yale, 1844,	New Haven.
Tyler, Nathan P.,	Yale, 1879,	New Haven.
Wainwright, W. A. M.,	Coll. Phys. and Surg., 1867,	Hartford.
Wakeman, M. H.,	Yale, 1854,	Redding.
Warner, Eli,	Coll. Phys. and Surg., 1867,	Hartford.
Warner, A. S.,	Dartmouth, 1847,	Wethersfield.
Warren, J. A.,	Coll. Phys. and Surg., 1860,	Ellington.
Way, Henry E.,	Univ. N. Y., 1849,	Bristol.
Weaver, C. H.,	Md. Coll. Phys. and Surg., '79,	Manchester.
Webb, D. M.,	Yale, 1849,	Madison.
Welch, Geo. K.,	Coll. Phys. and Surg., 1878,	Hartford.
Welch, James,	Berkshire, 1831,	West Winsted.

Name.	Place and Date of Graduation.	P. O. Address.
Weleh, William W.,	Yale, 1839,	Norfolk.
Wheeler, Frank,	Coll. Phys. and Surg., 1852,	Farmington.
White, F. O.,	Yale, 1873,	New Haven.
White, Moses C.,	Yale, 1854,	New Haven.
White, R. A.,	Yale, 1832,	Weatogue.
Whiton, F. H.,	Dartmouth, 1871,	North Mauchester.
Whittemore, F. II.,	Bellevue, N. Y., 1874,	New Haven.
Whittemore, F. J.,	Univ. N. Y., 1851,	New Haven.
Wildmau, W. G.,	Coll. Phys. and Surg., 1880,	Danbury.
Wile, William C.,	Univ. N. Y., 1870,	Sandy Hook.
Williams, A. S.,	Jefferson, 1840,	Brookfield.
Wilson, F. M.,	Harvard, 1875,	Bridgeport.
Wilson, S. A.,	Yale, 1852,	Windsor.
Winchell, A. E.,	Coll. Phys. and Surg., 1865,	New Haven.
Witter, John,	Yale, 1857,	Putnam.
Witter, William,	Yale, 1865,	Greenville.
Wood, Luther H.,	Yale, 1869,	Wolcottville.
Wood, William,	Univ. N. Y., 1847,	East Windsor Hill.
Woodruff, William,	Yale, 1826,	Thomaston.
Woodward, Ashbel,	Bowdoin, 1829,	Franklin.
Wordin, N. E.,	Jefferson, 1873,	Bridgeport.
Worthington, A. B.,	Yale, 1842,	Middle Haddam.
Wright, F. W.,	Bellevue, 1880,	Hamden.
Wright, T. G.,	Univ. N. Y., 1865,	Plainville.
Wright, J. W.,	Univ. N. Y., 1880,	Bridgeport.
Young, Francis J.,	Yale, 1866,	Bridgeport.
Zink, Walter,	Wurtzburg,	North Brauford.

Members noticing any errors or omissions in any part of their record will please inform the Secretary for correction in future lists.

APPENDIX A.

REPORT OF THE COMMITTEE ON EXAMINATION.

BY D. A. CLEAVELAND, M.D., Middletown, CLERK.

The Faculty and members of the Board of Examiners representing the Connecticut State Medical Society, met at the Medical College on June 27, 1882.

In the absence of Dr. Deming, President of the board, Dr. H. S. Fuller was chosen president *pro tem*.

Dr. D. A. Cleaveland was elected reporter to the State Medical Society.

The following gentlemen, after having passed satisfactory examinations in the several branches required, were granted degrees :

William H. Grinley,	George M. Bush,
Charles W. Dana,	William H. Hawkes, B.A.,
Walter L. Lea,	Charles E. Park,
Dwight A. Richardson,	James E. Stetson,
Caryl F. S. White,	Walter C. Whiting.

The standing of the above named gentlemen was very good in all the required branches with the exception of ophthalmology, in this some failed to come up to the required standard, in consequence of which their average standing was diminished. It is desirable that in future, students may be impressed with the importance of this branch, and improve as fully as they may be able the excellent advantages offered them by the professor in this department.

The following gentlemen were admitted to partial examination, and passed in several branches as follows :

WALTER C. CAMP, B.A.,	Chemistry.
WILLIAM H. CHITTENDEN,	Chemistry and Histology.
FREDERICK S. SMITH, B.A.,	do. do.

JOHN E. W. THOMPSON,	Chemistry and Histology.
RALPH B. WATKINS,	do. do.
FRANK H. WHEELER, B.A.,	do. do.

Three other gentleman presented themselves for examination in these two branches, and were conditioned.

The remark made by the reporter last year in regard to the admission of students without a preliminary English education is still in order, as the examination papers of some of the students show. We hope for an improvement in this particular in future.

PROCEEDINGS

OF THE

Connecticut Medical Society,

1883.

NINETY-SECOND ANNUAL CONVENTION,

HELD AT

Hartford, May 23d and 24th.

NEW SERIES. VOL. II.—NO. 4.

PUBLISHED BY THE SOCIETY.

S. B. St. JOHN, M.D., Secretary,

HARTFORD, CONN.

HARTFORD, CONN.:

PRESS OF THE CASE, LOCKWOOD & BRAINARD COMPANY.

1883.

The Connecticut Medical Society does not hold itself responsible for the opinions contained in any article, unless such opinions are endorsed by a special vote.

Next Annual Convention of the Connecticut Medical Society will be held in New Haven, May 28 and 29, 1884.

All communications intended for the Connecticut Medical Society must be addressed to S. B. St. John, M.D., Hartford, Conn.

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OFFICERS OF THE SOCIETY.

1883-1884.

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E. B. NYE, M.D., Middletown.

VICE-PRESIDENT.

B. N. COMINGS, M.D., New Britain.

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S. B. ST. JOHN, M.D., Hartford.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

W. C. WILE, M.D.

J. H. GRANNIS, M.D.

E. C. KINNEY, M.D.

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H. S. FULLER, M.D., HARTFORD.
ORLANDO BROWN, M.D., WASHINGTON.
P. A. JEWETT, M.D., NEW HAVEN.
J. H. GRANNIS, M.D., SAYBROOK.
C. B. NEWTON, M.D., STAFFORD SPRINGS.
G. F. LEWIS, M.D., BRIDGEPORT.
M. STORRS, M.D., HARTFORD.

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ISAAC G. PORTER, M.D. W. J. BEACH, M.D.
ORLANDO BROWN, M.D. J. G. STANTON, M.D.
J. B. KENT, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

C. H. BILL, M.D. A. WOODWARD, M.D.
LOWELL HOLBROOK, M.D. R. HUBBARD, M.D.
R. W. MATTHEWSON, M.D.

Committee of Publication.

S. B. ST. JOHN, M.D., } *ex officio*.
E. P. SWASEY, M.D. }
I. W. LYON, M.D.

Committee of Arrangements.

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Anniversary Chairman.
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S. G. CHAPMAN, M.D.

Dissertator.

N. E. WORDEN, M.D.

Alternate.

W. H. HOLMES, M.D.

PROCEEDINGS

CONNECTICUT MEDICAL SOCIETY--NINETY- SECOND ANNUAL CONVENTION.

The President and Fellows of the Connecticut Medical Society met in the Common Council Chamber, City Hall, New Haven, at 3 o'clock P. M., Wednesday, May 23, 1883.

The President, Dr. William G. Brownson, M.D., of New Canaan, called the convention to order promptly, and appointed Dr. D. A. Cleaveland and the Secretary as the Committee to examine the credentials of the elected Fellows. Dr. Cleaveland stated that as he was not a Fellow he could not act upon that committee. Although his objection was not a valid one, as having once been elected a Fellow all the rights and privileges could be exercised by him except voting, to avoid delay and perhaps discussion of the point, the President appointed Prof. F. E. Beckwith, of New Haven. The committee reported that Fairfield county had elected alternate Fellows, and that Drs. W. C. Wile and Wm. C. Buike, Jr., appeared as alternates for two who would not be present. The committee endorsed the recommendation of the one of last year, that a by-law be added requiring the election of alternate Fellows in each county. As this was formally proposed last year, it was subsequently taken up and passed. Requests were made that the presidents of county societies, two of whom were the only elected Fellows present from their counties, should be allowed to appoint Fellows from members of their county societies present, in order that they might be fairly represented in the convention. The committee agreed with the decision of a former committee that such a practice might result unfavorably to the interests of the society; also that they had no power to grant the request. As the idea was not favored, but objected to strongly, no request was made to the society to allow such appointment. The list of Fellows as pub-

lished was then accepted, with the substitution of the alternates named, and the committee discharged. The following is the list as presented:

LIST OF FELLOWS, *ex-officio*.

President.

WM. G. BROWNSON, M.D.

Vice-President.

E. B. NYE, M.D.

Vice-Presidents, ex-officio.

GEO. F. LEWIS, M.D., Hartford Co.
 *M. N. CHAMBERLIN, M.D., New Haven Co.
 E. C. KINNEY, M.D., New London Co.
 GEO. L. PORTER, M.D., Fairfield Co.
 *S. L. HUTCHINS, M.D., Windham Co.
 WILLIS J. BEACH, M.D., Litchfield Co.
 A. B. WORTHINGTON, M.D., Middlesex Co.
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Treasurer.

E. P. SWASEY, M.D., New Britain.

Secretary.

C. W. CHAMBERLAIN, M.D., Hartford.

Committee on Matters of Professional Interest in the State.

W. A. M. WAINWRIGHT, M.D.
 H. S. FULLER, M.D.
 GEO. F. LEWIS, M.D.

FELLOWS ELECTED IN 1883.

Hartford County.

Geo. W. Avery, M.D.	R. Strickland, M.D.
W. T. Bacon, M.D.	*H. E. Way, M.D.
E. J. McKnight, M.D.	

New Haven County.

W. H. Carmalt, M.D.	F. E. Beckwith, M.D.
W. H. Holmes, M.D.	A. Beardsley, M.D.
E. T. Bradstreet, M.D.	

New London County.

*L. S. Paddock, M.D.	F. N. Braman, M.D.
J. G. Stanton, M.D.	S. L. Sprague, M.D.
*A. Woodward, M.D.	

Fairfield County.

S. F. Delamater, M.D.	Geo. F. Lewis, M.D.
Wm. C. Wile, M.D.	J. G. Gregory, M.D.
Wm. C. Burke, Jr., M.D.	

Windham County.

E. A. Hill, M.D.	F. G. Sawtelle, M.D.
*T. M. Hills, M.D.	J. B. Kent, M.D.
Charles Gardner, M.D.	

Litchfield County.

*L. H. Wood, M.D.	†C. H. Gilbert, M.D.
*H. W. Shove, M.D.	*L. G. Ketchum, M.D.
*C. O. Belden, M.D.	

Middlesex County.

R. Baker, M.D.	R. W. Matthewson, M.D.
Miner C. Hazen, M.D.	*C. A. Sears, M.D.
Geo. W. Burke, M.D.	

Tolland County.

*E. P. Flint, M.D.	A. R. Goodrich, M.D.
S. G. Risley, M.D.	

The President then addressed the convention as follows:

Fellows and Brethren of the Connecticut Medical Society:

We meet to-day in accordance with a custom sanctioned by the Fathers and honored through nearly a century. While we gladly anticipate this gathering as an occasion for social and professional

* Absent.

† Dead.

greeting and enjoyment, we may justly claim to be animated by the higher motive of so increasing our knowledge and enlarging our views of duty that we may the better subserve the interests of our several communities and of the State.

I sincerely thank you, gentlemen, for the unsought, unexpected and distinguished honor of being called to preside at your deliberations; and most earnestly crave your indulgence and co-operation while I shall endeavor impartially to administer the duties of the office.

Among the suggestions and recommendations which seem appropriate to bring before you for your consideration and action, it appears to me important to ascertain whether the Connecticut Medical Society is at present based upon a legal and unquestioned charter. There appear to be some legal doubts whether by a literal construction Article 6th of the revised charter of Yale Medical School of 1879 does not virtually repeal the charter of the Society. The appointment of a committee to secure, if deemed necessary, the passage of a healing act, or to make any needed revisions, or both, is hereby recommended.

By reference to the published proceedings of past years we find that the membership in most of the counties has largely increased, while the representation of Fellows in the State Society differs but by two or three from that of twenty or forty years ago. I suggest whether it might not be advisable to increase the representation of Fellows, at least from the counties of New Haven, Hartford, and Fairfield,—making either the number of members in the several county societies, or the amount in taxes actually collected and paid to the Treasurer, the basis of representation. I would also suggest the propriety of still further increasing the list, by making all ex-presidents Permanent Fellows; and that they be constituted a Board of Councillors with such specific duties as the Society see fit to impose. All matters of discipline, admission or rejection of applicants, or dismissal of members, the selection of essayists, and arranging for suitable literary exercises, might with advantage be referred to such a judicial council, whose recommendations should be subject to adoption or rejection by vote of the joint convention.

In view of the advantages of the most thorough acquaintance on the part of the Secretary with the county societies, and to secure the most desirable results from the proper administration of this

important office, I would respectfully suggest the advisability of appointing a permanent Secretary, removable for cause, and that, if the funds of the Society warrant it, a salary of fifty dollars be appropriated to such office. Also a salary of twenty-five dollars to a permanent Treasurer, or to one appointed for a considerable term of years, would seem but a just recognition of the services rendered. The funds of the Society might be increased somewhat, and it seems to me without disrespect or injustice to our advanced and honored brethren, by repealing Section 3d of Chapter 5th of the by-laws.

I am requested by the present Secretary to state that the press of other business will compel him to decline to serve longer in that capacity. In retiring from this office which he has so ably filled during the past eight years, he can have the satisfaction of knowing that during no equal portion of its history has the Society been so prosperous. Notwithstanding the unusually high death rate,—there having been eighty-six deaths during this period,—the net gain in membership has been about one hundred.

The favorable reviews by the medical press of our published proceedings have been as gratifying as the promptness with which they have appeared.

Another subject which we might consider with profit is the astonishing increase of new remedies, so called, which are being thrust upon the notice of the medical profession. While our fathers had, doubtless, a too limited supply of drugs, may we not be upon the other extreme of experimenting with too many? Though we should not underestimate the value of the services rendered by those who, within a few years, have brought to our notice many remedies of real merit; still the active practitioner should sift with care, and tread upon new ground with caution. The physician who uses a new remedy because it is recommended by the manufacturer descends to the plane of his ignorant, credulous patient, whose authority for the value of a nostrum is the newspaper. I would here recommend the appointment of a committee on new remedies, to solicit correspondence from physicians throughout the State, and to report at our yearly meetings a list, not to exceed five in any one year, of such new remedies as have been tested and approved by a majority of the correspondents.

It is occasion for congratulation that the county societies, from which the State Society derives its strength, continue to report an

increase in numbers and in interest. The recommendation of your late President that a few prominent citizens be invited to listen to the proceedings, and share the hospitalities of such gatherings, has been adopted already with satisfactory results.

Let me here suggest whether in our county as well as in our State meetings we may not be falling into the error of devoting too much time to the consideration of specialties in surgery to the exclusion of the more common and hence more important subjects of our daily practice. Within the knowledge of all who are gathered here to-day, how few are the cases in which extirpation of a kidney, or resection of the stomach, or removal of the ovaries, would be considered expedient or justifiable? On the other hand, how many under our care urgently demand the highest skill that we may acquire by the most careful research and thoughtful discussion, for the relief of suffering in advanced Phthisis? or what is better for arresting, if possible, this dire disease in its incipient stages? While we would not in the least detract from the splendid achievements in the rarer forms of modern surgery, still we should not be so dazzled by their brilliancy as to lose sight of the vast numbers who daily demand our best endeavors. He who can best explain how to ward off a common cold,—that entering wedge of destruction to so many in our climate, or by his skill so shorten and alleviate it that no scar is left behind, though his name be not heralded through the medical press, is second to none in the profession as a benefactor of his race. He who can define the means for preventing the invasion or arresting the spread of the more malignant and destructive zymotic diseases is also a benefactor. Although much has already been done, still, the field is so broad, and the necessities are so urgent, that we should be untiring in our efforts in this direction. Many precious lives may undoubtedly be saved by enlightening the public as far as practicable upon the necessity of strict isolation and other hygienic precautions in infectious diseases. The important admonition of the efficient Secretary of the Health Board regarding public funerals where death has resulted from diphtheria, scarlet fever, etc., should, by our legislators, be embodied into a law which should be universally observed and respected throughout the State.

We heartily commend the action of the Legislature in refusing to repeal the statute regarding compulsory vaccination. A deplorable ignorance prevails regarding the subject, and an

unfounded prejudice exists in the minds even of the intelligent. We hold it to be the duty of physicians to enlighten the community upon the subject of vaccination.

We cannot too highly commend the efforts being made by some of our leading schools for a higher literary and scientific culture, preparatory to the duties of general medical practice. Should this higher standard of attainment become the settled and uniform policy of our medical institutions, thereby lessening the quantity and improving the quality of medical service, the public would undoubtedly gain by the change. Might not also the swollen streams of medical literature contain less of sediment and drift-wood, thereby furnishing draughts more refreshing and better adapted to the needs of the earnest worker? Have we not in the current medical literature of our times too much of the hasty theory, speculation, and experiment in place of proven and established principles as the necessary foundation for useful and successful work?

I can conscientiously recommend the suggestions of my worthy predecessor regarding the code of medical ethics. This subject is engaging the attention of thinking men in the medical profession and outside of it to a remarkable degree. Like all innovations upon cherished and time-honored legacies from the fathers, a strong, not to say bitter opposition is encountered from many noble men, who have a jealous care and solicitude for the honor of a noble profession. But a profession of itself is not noble, otherwise a true nobility would attach to mere membership in it, which is a palpable absurdity. Our profession, like all others, contains the worthy and the unworthy, and must be measured only by the character and worth of its individual members. In my judgment the time is fast approaching when a code of medical ethics will be remembered only as a thing of the past. The growth of man outstrips constitutions, creeds and codes. And as changed circumstances necessitate a change in legislation,—as constitutions require amendment, and as creeds demand modification to meet the larger, more enlightened needs of man, so codes become a by-word, a dead letter, unless their scope be adequate to the requirements of the age. An enlightened conscience and the Golden Rule, that germ and fruitage alike of all true theology, will displace and stand far above all human instruments for the regulation and guidance of professional intercourse and conduct. In all cases

where the printed directions come into conflict with the voices of God, of conscience, and of humanity, the voices should be heeded though the printed page fade from neglect and disuse.

Let me not here be misunderstood or misquoted. I have profound respect for those noble and conscientious men who venerate the code and its worthy founders. But in all sincerity I ask from them an equal respect for the motives of those equally conscientious, who believe that during the progress made in the past thirty-six years this instrument has so outlived its usefulness that at least modifications seem not inappropriate to the changed conditions of the times. We cannot resist the spirit and tendencies of the age; an age marvelous in its intellectual activity, its eager questionings,—the mighty energy with which it wrestles for nature's secrets and seeks eternal verities. And with resulting growth and advancement come liberality of spirit, toleration, and charity. And while we would not be revolutionary or aggressive, neither would we be restrained by absurd rules or unreasonable limitations. We may not safely ignore the verdicts rendered by that great jury, public opinion, from whose decisions, in our country, there is no appeal. Often in advance of professions, legislators, or presidents, it becomes akin to the "higher law," and we must in due time, whether reluctantly or willingly, acquiesce in its decisions. While the popular judgment, not only of the ignorant, but of the most intelligent and influential outside of our profession, is so largely in sympathy with the new departure, and while so many of our brethren occupying a position second to none in professional standing, in ability, and in moral worth deem it expedient, should we not at the proper time, avoiding all unmerited charges of sordid or sinister motives, approach the discussion of this question calmly, dispassionately, without partisanship or prejudice, differing, if differ we must, in a friendly spirit, harmonizing our differences, if we may, in a spirit of loyalty to truth and duty?

There are reported from our membership about the usual number of deaths during the past year. The final tribute to their worth and memory which justice and affection alike suggest, will be fittingly offered in due time. Let us strive to avoid their mistakes, so to imitate and excel their virtues, so to live and to labor that at our departure the world may feel a loss that shall be to us an eternal gain.

The President then announced the following Committees:

On Unfinished Business.

Geo. W. Avery, M.D. W. H. Carmalt, M.D.
J. G. Stanton, M. D.

On County Resolves.

A. R. Goodrich, M.D. W. C. Burke, Jr., M.D.
Charles Gardiner, M.D.

On Business.

C. W. Chamberlain, M.D., *ex-officio.* R. W. Mathewson, M.D.
F. E. Beckwith, M.D.

On Honorary Members and Degrees.

J. G. Gregory, M.D. J. B. Kent, M.D.
W. H. Holmes, M.D.

Auditing Committee.

A. Beardsley, M.D. R. Baker, M.D.

To Nominate Essayists.

Geo. F. Lewis, M.D. R. Strickland, M.D.

On motion of Dr. Wile, it was voted: That a committee be appointed to report in relation to each of the recommendations made by the president. It was also voted that these should consist of three each, and, after some discussion, that they should be appointed by the chair. The president objected to choosing the committees to act upon his own suggestions, but this did not appear to be any valid reason why he should not do so, unless there was some other cause for different action.

LEGAL STATUS OF THE SOCIETY.

There was considerable discussion upon the committee upon the *status* of the society. It was moved that this committee should have power to act without reporting to the society, to avoid delay, as the legislature meets in January.

Prof. M. C. White remarked that other queer things had crept

into the charter of the Medical College, enacted in 1879, besides the clause which is said to repeal the whole charter of the State Medical Society. For example, the provision that that charter "may be amended or repealed at the pleasure of the General Assembly" was so strongly denounced by Ex-President Woolsey that the charter has never been approved by the Corporation of Yale College.

The provision for granting *licenses* for the practice of medicine, as it stood in the old charter, has been omitted, and instead a clause has been inserted providing for the same thing, in language so blind that few would be likely to understand it. This method of doing what we are ashamed to announce openly is not creditable to this society. The provision in the charter of the college that in case the union between Yale College and the Connecticut Medical Society shall be dissolved by mutual consent, then "any prerogatives heretofore possessed by the Medical Society shall revert to the same," means, if it means anything, that examining committees in each county society shall have power to grant licenses, and that the State Society shall resume the power to grant degrees, as was the custom from 1792 to 1810.

The Medical Faculty had no knowledge that any such provision was to be placed in the new charter, and the speaker believed that neither the State Society nor the medical profession of the country would tolerate or approve any such prerogatives at the present day. None of the provisions alluded to would have been approved by this society if they had been submitted to its consideration, instead of being left to the discretion of a committee, as the whole subject was submitted to the committee in 1878.

The original compact, or "Articles of Union," between Yale College and the State Society has been modified by repeated revisions.

The charter of the State Society appears to have been repealed in 1879, and it is doubtful whether the old charter of the Medical College is now in force, or whether the charter of 1879 is the law of the land when not accepted by the Corporation of Yale College, and it is also uncertain whether the Medical College is now conducted according to the provisions of any charter, either new or old.

It is, therefore, very important that any new committee appointed to consider these matters should consist of men thoroughly acquainted with the history of the society, and the compact between the State Society and the Corporation of Yale College.

Furthermore, if anything is to be done, altering in any way the charter of the Medical College, or any clause of the same, it will be necessary to ask for a joint committee in which the Corporation of Yale College shall be represented.

Whatever might be done, in the opinion of the doctor, the action recommended by the committee should be reported to the State Society for approval before the proposed action is submitted to the Legislature.

Prof. Hubbard inquired what the value of the charter was to the society; we had proceeded very well several years without one.

Dr. Chamberlain stated that about the only value of the charter, as far as he knew, was the power it gave to collect taxes, which was never used, and to sue and be sued. The most useful result was the power to hold money, should any be left us, and also real estate, should we acquire any.

In answer to several inquiries for an account of the movement that resulted in the repeal of the charter, he replied as follows:

In 1878 a resolution was introduced asking for the appointment of "a committee of three to confer with a similar committee to represent the Medical College, to consider the propriety of making some changes in the charter of the Medical Institution of Yale College, with authority to co-operate with said committee in securing from the Legislature such alterations of the charter as may be mutually agreed upon." This did not originate on the part of the society, but the committee was voted, the resolution passed as offered, and Drs. C. W. Chamberlain, L. H. Wood, and H. P. Stearns were appointed. Dr. Wood did not act with the committee. There were several changes made, and it was, after a long and plain discussion, voted to retain the power to grant licenses, but to cloak it in the phraseology quoted, and objected to so strongly by Prof. White. This committee was a joint one, composed of members of the Medical Society and of the Corporation of Yale. When we met a document was read to us as the conclusions arrived at by the committees on the part of the college, and the medical faculty. The Medical Faculty was represented by Prof. Silliman, the Corporation by B. F. Harrison, Esq., and President Porter, who was president of the committee. We were told that the changes proposed had been discussed and agreed upon by the parties at interest, and it only remained for us to ratify or reject them. The impression was that it was the intention to dissolve the connection between

the society and Medical School, but in the revision only permissive power was incorporated. Apart from the license question the only discussion of any consequence was upon the clause (which, also, Prof White disapproves) which provides if the union be broken, that "*any prerogatives heretofore possessed by the Connecticut Medical Society shall revert to the same.*" We did not think that in case of such dissolution the society would relinquish time-honored powers and place itself at a disadvantage with every other medical society that is organized by the state. As stated, that means that every county society could grant licenses as they can in New York now, and that the Connecticut Medical Society could grant the degree of M. D. in course, and the honorary degree. It appeared to your committee that such powers should not be relinquished, for while there is now no cause for their exercise, no one knows what the future holds, and the rights should be sacredly guarded. Sec. 6, which has repealed the charter, if it be repealed, which certainly was not its intent, reads as follows:

"*And be it further enacted, That the act entitled 'An Act to Incorporate the Connecticut Medical Society, and to Establish the Medical Institution of Yale College,' and all acts in addition to, and in alteration thereof, be, and the same are, hereby repealed; provided, that all proceedings had and obligations imposed in pursuance of the acts hereby repealed, shall have the same effect as though said acts were still in force.'*"

That no such section was read or agreed upon in joint committee, both Dr. Stearns and myself are positively certain. Nor do I have any recollection of having seen it when I received the act. The manuscript was sent to me directly from President Porter, and after I had submitted it to several members of the society, I placed it in the hands of a member of the legislature to introduce, and explained it to the legislative committee, to whom I gave a letter from President Porter which stated that the act was the expression of the wishes of the college. I have since learned that when reported to the House of Representatives it was tabled upon the expressed desire of some member to see if it in any way restricted the practice of medicine. That Sec. 6 may have been added, as Sec. 7 was, while the bill was in the hands of the legislative committee, is possible. The rule recently adopted, that

every bill shall be filed in the office of the Secretary of State exactly as introduced, without any *alterations, additions, or interlineations*, is certainly suggestive. If the section was in the original act when submitted, it was overlooked upon the idea that as it was taken over *verbatim* from the old charter its re-enactment would not change anything. It has been in print four years, receiving, as stated, much unfriendly criticism in New Haven, yet until last year no one discovered that it could accomplish any such result. With regard to Sec. 7, the Legislature can take such action with regard to any measure, and its statement is merely a formality.

The committee endeavored to secure the rights of the Society, and whatever opinion may be upon the advisability of a severance of the union, or its effect upon the interests of the Medical School, there appeared to us to be no disposition upon the part of the Society to enforce an undesired union. The repeal of the charter, while annoying, if true, as legal opinions differ, can be soon rectified. A healing act could readily have been passed at the last session of the legislature had there not been a wish expressed for a revision of certain points, and the action of the Society upon them. The by laws and legal existence of the Society are not affected.

I agree with Professor White, that the committee to be appointed should report to the Society before final action be taken, and if to a special session, their report may receive final action at the next regular convention. The committee should be large, and carefully made up of representative members from each county. Professor Carmalt moved an amendment, that the Fellows from each county should select a member of this committee. The chair declared the motion and amendment out of order, as the composition of the committee had already been voted upon and limited to three. Dr. Chamberlain moved that that part of the resolution relating to the appointment of the committee on the *status* of the Society be reconsidered. It was so voted. Professor Carmalt then offered the following :

Resolved—That a Committee consisting of one member from each county to be selected by the Fellows from the respective counties be appointed to take into consideration the legal status of this Society, with power to employ counsel and to report at a special meeting of this Society to be called by the President,

which was passed unanimously, and the following names were reported by the Fellows from the counties :

Dr. C. W. CHAMBERLAIN, Hartford.
 Prof. W. H. CARMALT, New Haven.
 Dr. F. N. BRAMAN, New London.
 Dr. G. F. LEWIS, Fairfield.
 Dr. SAMUEL HUTCHINS, Windham.
 Dr. H. W. BUEL, Litchfield.
 Dr. GEO. W. BURKE, Middlesex.
 Dr. A. R. GOODRICH, Tolland.

The Committee on Unfinished Business reported favorably on an amendment to Sec. 7, Chap. IV, on the duties of county censors, which will be found incorporated in the section. As several changes have been made since last printed, the by-laws are found entire, as they now stand, in the Appendix. On motion of the Secretary the report was accepted and the committee discharged. The by-law was then formally passed.

A recess was then taken for election of the nominating committee. The Fellows reported the following names:

GEO. W. AVERY, M.D., Hartford County.
 Prof. F. E. BECKWITH, M.D., New Haven County.
 J. G. STANTON, M.D., New London County.
 GEO. L. PORTER, M.D., Fairfield County.
 A. E. HILL, M.D., Windham County.
 WILLIS J. BEACH, M.D., Litchfield County.
 MINER C. HAZEN, M.D., Middlesex County.
 A. R. GOODRICH, M.D., Tolland County.

The session was then resumed with the Treasurer's report from Dr. E. P. Swasey. The following is an abstract

Balance on hand from old account, May, 1882,	\$447.97
Cash received during the fiscal year,	611.98
	<u>\$1,059.95</u>
Expenditures during the fiscal year,	\$421.80
Balance in Treasury, May, 1883,	<u>\$638.15</u>
Increase of receipts over those of 1881,	\$49.08
Decrease of expenditures from those of 1881,	76.37
Excess of receipts over expenses,	190.80
Excess over balance of last year,	191.18
Amount due on taxes previous to 1882,	Nothing.

Amount due on taxes of 1882.

Hartford County, James Campbell, M.D., clerk,	Nothing.
Windham County, R. Robinson, M.D.,	"
Tolland County, G. H. Preston, M.D.,	"
Middlesex County, J. F. Calef, M.D.,	\$4.00
New London, A. Peck, M.D.,	12.00
New Haven County, W. H. Holmes, M.D.,	12.00
Litchfield County, J. J. Newcomb, M.D.,	14.00
Fairfield County, F. M. Wilson, M.D.,	58.00
Total,	<u>\$100.00</u>

Some of this should be subtracted for abatements, but the greater part is collectible. The increase in the receipts for the past two years is due to the collection of arrearages. These were all cleared up except in one county year before last, and in that county this last year, so that although the indebtedness on the present tax is larger than it has been for several years, the clean score quite compensates. If the members generally were aware of the trouble and confusion in the accounts caused by these arrearages, which more than double the work of the Treasurer, they would promptly pay their dues, a small matter for each one, but large in the aggregate. The Society is under great obligations to the efficiency and persistency of the County Clerks. By their untiring energy the arrearages have been all paid up, and there is only a small part left due on this year's tax. The accounts which have been in a very unsatisfactory condition in some instances have been entirely straightened, and put in such shape that no confusion need hereafter arise, with ordinary care. The contrast between such efficient work, and the reverse, which has been too often seen, emphasizes the value of faithful service, and the importance of retaining in office such clerks as long as they will consent to serve. The relations of the County Clerks to the Treasurer also make a change undesirable, as the new clerk, however efficient he may become, must learn his duties. It is of course very satisfactory to see the balance in the treasury increasing, and that we have the largest balance for many years, if not at any period of the Society's history. Unless the expenses are very much increased we have quite a surplus over a working balance. If this can be made a permanent condition, the financial state will be satisfactory indeed.

While the receipts of the past year have considerably exceeded those of any previous year, and make altogether an excellent showing, the satisfactory record of the counties for 1881 is not maintained in 1882, for of the eight counties in 1881, but one was in debt, and in 1882 only three at the time of the annual meeting are entirely out of debt. The indebtedness of all the counties, however, is small, not exceeding one hundred dollars. The large increase in receipts this year is mainly due to the energy and zeal of Dr. Holmes of Waterbury. In rendering his account Dr. Holmes writes "When I became clerk there was a large amount of unpaid taxes due, many of the accounts running back three and four years. I have collected the whole of these back taxes, thus leaving every account square up to 1882. I have collected all of the taxes for 1882 with the exception of those due from six members. The books of New Haven county were very badly behind hand when I received them, and it has been only at the expense of very great labor that I have succeeded in bringing them up to their present condition."

In Fairfield county a change of clerks was made the present year, which may account for this county falling again into arrears.

The total indebtedness of the present year is so small that it would appear reasonable and probable that the ensuing year might see all indebtedness of the county societies to the mother Society extinguished, a condition most nearly approached, as yet, by my predecessor, Dr. Edgerton, whose labors, combined with suggestions from Dr. Chamberlain to the county clerks, resulted in so satisfactory a report last year, and bequeathed to me a bundle of much smaller dimensions than when he assumed the duties of Treasurer.

The report of the Treasurer was referred to the Auditing Committee, who, after comparing it with the accompanying vouchers, declared it to be correct. On motion of Dr. Chamberlain the report of the Auditing Committee was accepted and the committee discharged.

The Committee on Honorary Members and Degrees reported that there had been no recommendations for an honorary degree brought before them. They recommended the election of Dr. John S. Billings, Assistant Surgeon-General U. S. A., of Washington, as an honorary member, and proposed the names of Dr. James E. Reeves, of Wheeling, West Virginia, and Prof. T. A. Emmett,

of New York, for action next year. The report of the committee was accepted and the committee discharged.

Dr. J. S. Billings was then unanimously elected an honorary member of this Society.

The President then announced the following committees on increasing the number of Fellows, making the Secretary a permanent officer, and other amendments to the by-laws suggested in his address :

W. C. Wile, M.D. Prof. W. H. Carmalt, M.D.
Charles Gardiner, M.D.

Committee on New Remedies.

A. R. Goodrich, M.D. G. W. Avery, M.D.
A. Beardsley, M.D.

The duties of this second committee are to report to the next convention upon the most prominent new remedies, not exceeding four or five, and to ascertain their value by correspondence, medical literature, or otherwise. It was also moved that this committee be added to the standing committees of the Society, and referred to the next convention for final action, as a by-law.

The committee to secure from the legislature a revision of the laws of the State relating to Coroners, presented the following report through their chairman, Prof. S. G. Hubbard, M.D. of New Haven :

REPORT ON THE LAW CONCERNING CORONERS.

The Committee "charged with the duty of bringing before the attention of the legislature the great importance of a change in the laws providing for the detection of crime, and particularly to change the laws respecting the appointment and duties of Coroners," have held no meeting. But, bills prepared by the undersigned, and by others, with this object in view, were presented to the legislature and came in due course before the committee on the Judiciary, by whom they were carefully considered. The result has been the preparation by that committee of a substitute bill, which, after having been in its turn critically examined by physicians and lawyers, reached a state of completeness which received the general approval. As an evidence of the great superiority of this bill over any other of which we have any knowledge, it may be added that it was promptly passed by the unanimous votes of both branches of the General Assembly, and will soon be in practical operation as the law of the State.

S. G. HUBBARD,
Chairman.

The report was accepted and the committee discharged.

Dr. Chamberlain spoke of the work accomplished by Drs. Cleveland and Porter, each of whom visited Massachusetts several times to learn the practical working of the system there upon which ours is based, as it has the essential features, a legal officer to manage testimony and all the technical legal points involved, and the medical examiner, who has full management of the parts of the investigation which a physician alone can properly perform. He is first called and has thus every opportunity to learn all that can be learned by the position of the body and of its surroundings before such evidence is irretrievably lost.

The pernicious feature of the old law which made every Justice of the Peace a Coroner was entirely repealed. The bill as passed was the result of the work of a special committee from the judiciary, and the Society are greatly indebted to W. W. Perry, Esq., representative from Hartford, for securing the rights and privileges of physicians in the bill as passed. The claims of the medical examiner and the province of the physician in the work to be done were intelligently and forcibly presented by him to the committee, and secured recognition. The success of the law depends largely upon the fidelity of the medical examiners. As it is not every physician that understands medical jurisprudence it is expected that the position of Medical Examiner will be sufficient inducement for special study, at least how to conduct an autopsy scientifically. The German government issues a manual of instructions. Such works as Delafield's on Post Mortems, and that of Virchow on the same subject, smaller and more concise, contain all that is necessary to enable one to obtain all the information absolutely required in making autopsies.

Dr. Porter spoke of the work done by the Medical Societies in Fairfield county. The Bridgeport society had already prepared an ordinance similar to the present law, but found it could not be passed, as contrary to the State laws. The subject had been fully discussed in both city and county societies, and the attention of the public faithfully called to the evils of the present system which they had felt peculiarly and often. He spoke of the pecuniary loss inflicted upon physicians under the old law, who were compelled to perform a vast amount of work for which they received no pay. This was especially true in the country towns and large villages, as many

members of the Society could testify. He presented several copies of the law to the Society, as many as he could obtain.

As the law interests the profession generally, it is here printed for the information of all interested.

An Act Concerning Coroners.

Be it enacted by the Senate and House of Representatives in General Assembly convened :

SECTION 1. The judges of the superior court at their annual meeting next to be held after the passage of this act, and every third year thereafter, shall appoint for each county, upon the recommendation of the state's attorney for such county, a coroner who shall be an attorney at law residing in such county, familiar with criminal practice and medical jurisprudence; which coroner when so appointed shall hold his office for the term of three years from the time of his appointment, and until another shall be duly appointed in his stead, unless he be sooner removed from office by said judges, who may, for cause shown, so remove him, and who may, on the recommendation of the state's attorney for the county, fill any vacancy in said office of coroner.

SEC. 2. Every coroner so appointed, before entering upon the duties of his office, shall be sworn and give bonds with surety in the sum of three thousand dollars to the state, conditioned for the faithful performance of all the duties of said office.

SEC. 3. The coroner shall appoint for each town of the county an able and discreet person, learned in medical science, to be medical examiner, who shall give a bond with surety in the sum of one thousand dollars to the coroner for the faithful discharge of the duties of his office, and who shall hold his office at the pleasure of the coroner. The coroner shall make such appointments in writing under his hand, and the same shall be recorded in the records of the superior court in his county. And whenever any medical examiner shall be removed, the coroner shall deliver to him a written discharge, and file a copy thereof with the clerk of the superior court for record.

SEC. 4. When any person shall come to a sudden, violent, or untimely death, and when any person shall be found dead, the manner of whose death is not known, any one who shall become aware of such death shall forthwith report the same to the medical examiner for the town in which the dead body lies, who shall pay the person first reporting such death fifty cents therefor, and who shall without delay repair to view and take charge of the dead body.

SEC. 5. Whenever after such view and immediate inquiry the medical examiner shall be satisfied that the death was not caused by the criminal act, omission, or carelessness of another, or others, and that there are no suspicious circumstances attending the same, he shall forth-

with make out, sign, and leave with the registrar of births, marriages, and deaths of the town, a certificate of death in the form required by law; and he shall also, immediately after such view and inquiry, make out and mail or deliver to the coroner of his county a certificate signed by him of the following or similar import:

I, the undersigned, A. B., medical examiner, having notice of the death of C. D., a [white or colored] male years old, late of the town of in [or if an unknown person state that fact and carefully describe the body, its clothing, and articles found on or near it which may be of service in its identification, always stating sex, color, apparent age, color and cut of hair, beard, color of eyes, and all special marks or deformities of body], who, on the day of A. D. 18 , [was found dead, or died,] in the town of , having viewed the body of said deceased, and made immediate inquiry concerning his death, do hereby certify that said C. D. died in on the day of A. D. 18 , from [natural cause, suicide, or accident, as the case may be, stating manner of suicide and nature of accident,] and that I am satisfied that the said death was not caused by the criminal act, omission, or carelessness of any other person or persons, and that an inquest is unnecessary. In accordance with the statute I have delivered the body of said deceased to [his friends or town authorities] for burial.
[Dated] A. B., Medical Examiner.

SEC. 6. Whenever a medical examiner shall see reason to suspect that the person whose body he has viewed came to his or her death by the criminal act, omission, or carelessness of another or others, he shall as speedily as possible by telegraph, telephone, or otherwise, notify the coroner for the county of such death and of the place where the dead body is lying. Whenever the coroner has such notice he shall at once, and on other notice may, proceed to view and take charge of the dead body, and make all proper inquiry respecting the cause and manner of the death; and if from such view and inquiry he shall be satisfied that the death was not caused by the criminal act, omission, or carelessness of another or others, then said coroner shall make and sign the certificates required in like cases of medical examiners by section five of this act.

SEC. 7. After a view and inquiry had by the coroner, if he shall have reason to suspect that the death was caused by the criminal act, omission, or carelessness of another or others, he may cause an examination or autopsy to be made of the body by the medical examiner or by some other competent surgeon or physician, who shall reduce or cause to be reduced to writing, either at the time of making such examination or autopsy or immediately thereafter, and when practicable in the presence of the dead body, every fact and circumstance found by such examination or autopsy which tends to show the identity or condition of such

dead body, and the time, manner, and cause of such death; which writing he shall subscribe under oath and deliver to said coroner. The taking of the testimony of such medical examiner, physician, or surgeon, and of any other person or persons whom the coroner may find it necessary to examine, shall constitute an inquest.

SEC. 8. Should the coroner deem it necessary, he may by warrant cause a jury of six judicious men of his county to be summoned before him to assist him in his investigation, which jury shall be by him sworn to diligently inquire, under his direction, into the cause and manner of such death and to present to him, on their oaths and over their signatures, a true verdict thereof. The coroner shall instruct said jurors in their duties and as to all questions of law that may properly arise at such inquest; he may adjourn such inquest to meet again at such time and place as he shall think proper, and he may order any inquest or any part thereof to be held in private, in which case only the persons by him designated shall be allowed to remain in the room or place where such inquest is being held.

SEC. 9. If the verdict or finding in any inquest charges any person or persons with having caused the death which is the subject of the inquest, the coroner shall without delay communicate the import of said verdict or finding to a grand juror or a prosecuting attorney of the town or city in which such death happened or was caused.

SEC. 10. The coroner shall reduce to writing, and shall, within ten days after any inquest has been held, return the testimony of all witnesses examined in the inquest to the clerk of the superior court in his county, together with his report of the inquest, which shall include his finding or the verdict of the jury, and he shall also return to said clerk all certificates sent him by the medical examiner in accordance with section five of this act, and all similar certificates by him made.

SEC. 11. Every coroner shall keep a proper and durable record book into which he shall copy all the certificates sent to or made by him as prescribed by sections five and six of this act, and in which he shall also keep a record of all views, inquiries, and inquests by him made or held, stating the time and place of the view and inquest, the names and residences of the witnesses, the cause and manner of the death as found, the disposition and place of burial of the dead body, and a careful description of all dead bodies not identified before burial.

SEC. 12. Whenever a coroner has notice that there is in his county a person who has been dangerously wounded or injured by the criminal act, omission, or carelessness of another, and who is likely to die from such wounds or injuries, he shall endeavor to take or cause to be taken the statement of such person concerning the manner in which, and the person by whom, such injuries were inflicted.

SEC. 13. In all cases arising under the provisions of this act the

medical examiner shall take into his possession and shall deliver to the coroner all the property found upon or near the deceased person, or which, in his judgment, will aid in the investigation of the death; and when such articles are no longer required to be kept for the purposes of justice the coroner shall deliver the same to the person or persons entitled to their custody, or if they are not claimed by such persons within sixty days thereafter, then such articles or property shall be administered upon according to law. After the termination of all proceedings by the medical examiner and coroner the body shall be forthwith delivered to the friends of the deceased for interment; but in case there are no friends who will take charge of and bury it, then to the proper authorities of the town in which such body is lying, whose duty it shall be to bury it. Whenever the deceased person shall not have left property sufficient to defray the expenses of the burial, then the same shall be paid by said town.

SEC. 14. For the purpose of securing evidence the coroner may enter any and all places in his county; shall have power to issue a warrant for a jury of inquest, to compel the attendance and testimony of witnesses by subpoena and capias issued by him or other proper authority, and to punish for contempt to the same extent as justices of the peace now may in criminal cases; he may order and cause witnesses to be kept separate, so that they cannot communicate with one another until they shall have testified; he may order or cause any person or persons whom he has good reason to suspect of having criminally caused the death in regard to which he is holding an inquest to be arrested and committed to the county jail or other proper place; he shall have power to take bail in such cases, or commit without bail when in his opinion the person arrested is guilty of a capital offense and when the proof against such person is evident or the presumption great. When bail is taken it shall be to the state and shall be conditioned for the appearance of the person so arrested before the superior court for such county at its next criminal term. Any person so arrested and admitted to bail may be re-arrested and committed by the coroner without bail, when in the opinion of the coroner the proof is evident or the presumption great that such person is guilty of a capital offense. In no case shall any person be kept under arrest by an order from a coroner for a longer time than twenty-four hours after the finding of a verdict by the jury, or after the finding by the coroner in such inquest; and at any time before such finding, whenever the grounds on which a person is so arrested cease to exist, in the opinion of the coroner, said coroner shall order the release of such arrested person.

SEC. 15. All process, orders, and papers proper to be issued by a coroner may be directed to any proper officer, and it shall be the duty of any such officer to serve such papers and process as directed, and,

when requested, to remain in attendance on such coroner and to execute his lawful orders during any inquiry or inquest by him being held.

SEC. 16. Every officer who shall wilfully violate any of the provisions of this act; and every person who shall wilfully, and without good cause, neglect or refuse to serve on a jury of inquest when duly summoned; and every person who shall wilfully, and without good cause, neglect or refuse to report a case of death as prescribed in sections three and eighteen of this act, or who shall wilfully and unnecessarily touch, remove, or disturb any dead body, or any article on or near such body, or disturb its surroundings, shall be punished by a fine not exceeding five hundred dollars, or by imprisonment not exceeding one year, or by such fine and imprisonment both.

SEC. 17. Every coroner shall for such time as he may designate appoint a deputy, who shall only act as such in case of the sickness, absence from his county, or other inability of the coroner, and when so acting, and for such time only, such deputy coroner shall have the same powers and duties as are by this act given to coroners, and while so acting shall receive the same fees as are herein provided for the coroner in like cases.

SEC. 18. In case of the absence or inability to act of the medical examiner it shall be the duty of any person becoming aware of the death of any person under the circumstances named in section four to report the same forthwith to the most accessible medical examiner for another town, who shall thereupon proceed to perform the duties and shall have the powers of the local medical examiner so absent or unable to act.

SEC. 19. In case the attendance of a coroner or of his deputy cannot be procured within thirty-six hours after the medical examiner has taken charge of a dead body, upon which an inquest ought to be held in accordance with this act, or sooner in case of the known inability of the coroner and his deputy to attend, the medical examiner who first took charge of such dead body may then hold such an inquest thereon, and in and for such case only such medical examiner shall have all the powers and be subject to all the duties given to and prescribed for coroners by this act; but the coroner, or in case of his inability his deputy, may at any time enter and take control of such inquest, and thereupon such medical examiner shall be relieved from all further powers and duties therein.

SEC. 20. If in any case it shall appear to the coroner to be necessary to have a chemical or microscopical analysis, or other scientific investigation, for the purpose of ascertaining the cause of the death of the person on whose body he is holding an inquest, he shall so report to the state's attorney of his county, who may order such analysis or investigation to be made, and who shall certify to the expense thereof,

which expense shall then be paid by the state, on an order therefor by the clerk of the superior court of such county; and the fees of any physician or surgeon for services rendered under the provisions of section seven of this act shall be certified and paid in the same manner.

SEC. 21. The following fees shall be paid by the coroner: a sum not exceeding five dollars for services rendered in bringing to land the dead body of a person found in any of the waters of his county; for pictures of a dead body, a reasonable sum; for keeping and removing dead bodies, and other incidental services and expenses, a reasonable sum; to the medical examiner, ten cents per mile for travel, and for an external examination only, the sum of five dollars; for an autopsy, twenty dollars; to the officer serving any process or papers, the same fees as for similar services rendered in criminal prosecutions, and for attendance on the coroner when requested, one dollar and fifty cents per day; to witnesses the same fees as in criminal prosecutions; but police officers of cities shall not be paid any fee by the coroner for serving papers, testifying before or attending on him.

SEC. 22. For the services required of and rendered by coroners under this act, they shall receive the following fees, to be paid quarterly in the manner provided in section twenty-three: for each day necessarily employed, fifteen dollars; and for each legal page of records and copies necessarily made after the termination of an inquest, forty cents.

SEC. 23. Every coroner shall return to the clerk of the superior court of his county a full account, signed and sworn to by him, of all his lawful fees, expenses, and payments in each view or inquest, which account said clerk shall submit to the state's attorney for such county, who shall endorse the same, if correct, or such items thereof as are correct, and the sums so indorsed shall be paid by the state on an order therefor by such clerk.

SEC. 24. All acts and parts of acts inconsistent herewith, including chapter twenty-three of title thirteen of the general statutes (page 181), and part one of chapter two, title sixteen of said statutes (page 205), and section thirty-one of chapter twelve, title twenty of said statutes (page 529), and chapter thirty-nine of the public acts of 1882 (page 139), and the provisions of all special acts giving authority to hold inquests on dead bodies, or perform any of the duties assigned to coroners and medical examiners by this act, are hereby repealed.

Approved, May 1, 1883.

The Committee on County Resolves presented the following report:

Your committee would respectfully report that they have

received a set of resolutions from the Middlesex County Medical Society, as follows:

WHEREAS, We are informed that Dr. R. Baker, an old and active member of this society, presented to the last annual State Medical Convention an interesting and respectable paper on "Specialties in Medicine," which was referred by that body to the Publication Committee for a place in the transactions of said convention; and that said paper was rejected by said committee, even after it was put in type, on the ground that it contained sentiments diametrically opposed to the views of said committee, therefore

Resolved, That we, the members of the Middlesex County Medical Society, do hereby express our disapproval of the conduct of said committee, as prejudicial and unjust to the members of the medical profession of our State in general, as well as to the writer of said paper.

Resolved, That the clerk of the Middlesex County Medical Society be, and is hereby, instructed to transmit a copy of these resolutions to the next State Medical Convention, and that said convention be requested to take such action in the premises as it shall deem proper.

HADDAM, Conn., April 26, 1883.

A true copy.

[Attest.] J. FRANCIS CALEF, M.D.,

Clerk.

And after careful examination and the hearing of parties on both sides, do report as follows:

That the paper of Dr. R. Baker on "Specialties in Medicine" not having been read before the Middlesex County Medical Society, nor before the State Medical Association, but having been referred to the Committee of publication for their acceptance or rejection; that neither the State nor County Societies knowing anything of the contents of said paper, it was eminently proper for said committee to act thereon; in fact, being in direct accordance with their official duty. But that your committee would deprecate and disapprove of the main reason given by the chairman of said committee in a letter to Dr. Baker why his paper had been rejected, your committee holding that a paper not corresponding to the personal views of the Committee of Publication, should under no circumstances constitute a reason for its rejection.

Respectfully submitted,

A. R. GOODRICH,
W. J. BURKE, JR.,
CHAS. GARDINER.

On motion of Dr. Chamberlain, the report of the committee was accepted and the committee discharged.

The Nominating Committee presented the following list of officers, which were duly elected. When the delegates to the various medical societies were reached it was voted that the secretary be instructed to cast the vote of the society for the persons nominated by the committee. All others were elected by regular balloting:

President. E. B. Nye, M.D., Middletown.

Vice-President. B. N. Comings, M.D., New Britain.

Treasurer. E. P. Swasey, M.D., New Britain.

Secretary. S. B. St. John, M.D., Hartford.

Committee on Matters of Professional Interest in the State.

W. C. Wile, M.D., J. H. Granniss, M.D.,
E. C. Kinney, M.D.

Committee on Examination.

Geo. F. Lewis, M.D., Bridgeport, M. Storrs, M.D.

Committee to Nominate Professors at the Medical Department of Yale College.

J. G. Stanton, M.D., J. B. Kent, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

R. Hubbard, M.D. R. W. Matthewson, M.D.

Committee of Publication.

I. W. Lyon, M.D.

Committee of Arrangements.

J. F. C. Foster, M.D., *Anniversary Chairman*, C. P. Lindsley, M.D.
S. G. Chapman, M.D.

Dissertator.

N. E. Worden, M.D.

Alternate.

W. H. Holmes, M.D.

Delegates to American Medical Association.

Drs. G. W. Avery, S. G. Hubbard, W. C. Burke, Jr., L. S. Paddock, T. M. Hills, W. J. Beach, S. G. Risley, W. B. Hallock, F. L. Dibble, F. J. Young.

Delegates to Maine Medical Association.

P. H. Ingalls, M.D., C. J. Fox, M.D.

Delegates to New Hampshire Medical Association.

M. C. Hazen, M.D., G. W. Russell, M.D.

Delegates to Vermont Medical Association.

Seth Hill, M.D., Frank Coates, Jr., M.D.

Delegates to the Massachusetts Medical Society.

F. E. Beckwith, M.D., J. G. Stanton, M.D.

Delegates to the Rhode Island Medical Association.

C. M. Carleton, M.D., R. M. Griswold, M. D.

Delegates to the New Jersey Medical Society.

H. P. Geib, M.D., J. G. Gregory, M.D.

When the delegates to the New York Medical Society were reached, Dr. Porter moved that the nomination be laid upon the table and referred to the official withdrawal of Fellowship from the New York State Society by the American Medical Association, and held that while we remained members of the National Association we could not hold official relations with them.

The motion was passed without debate.

On motion of Dr. Chamberlain, it was voted that the annual tax of two dollars, payable on and after June 1st, 1883, be assessed upon each member of the society, also that seven hundred copies of the Proceedings be published.

The Committee on Business then reported upon the following subjects that had been referred to them. With reference to the Army Medical Museum and Library of the Surgeon-General's Office, they reported the following series of resolutions, which were passed unanimously:

ARMY MEDICAL MUSEUM.

WHEREAS, The collections known as the Army Medical Museum and the Library of the Surgeon-General's Office, have been demonstrated to be of practical benefit and usefulness to the medical profession of this country generally, and are recognized by them as of inestimable value, no such collections being in existence elsewhere in this country. Therefore they should be so cared for as to render damage or destruction impossible. As this is not the case in the building in which they are now placed, it is

Resolved, That in the opinion of the Connecticut Medical Society the importance of the interests involved demands from Congress a liberal appropriation, sufficient to build a fire-proof building suitable for the present wants of both collections, and to provide for their future growth and increase.

Resolved, That as these collections have a similar object and aim, their interests are inseparable, and that any change in management or their separation would be a serious injury to their usefulness and value, and would essentially impair the benefits to be derived from each, as one supplements the other.

Resolved, That there should be a fair appropriation made annually by Congress for the proper care and development of these collections, and for such purchases as are needed to maintain the high standard of excellence at present attained—not less than fifteen thousand dollars a year.

Resolved, That Congress should extend suitable aid and encouragement to the "Index Catalogue of the Library of the Surgeon-General's Office," a work in which the medical profession, not only of this country, but of the world, are interested, and make such appropriations as are needed to push this work to a speedy completion.

Resolved, That a copy of these resolutions be sent to every member of Congress in this State, and their co-operation requested; also, that the members of this society be requested to use any personal influence they are able to exert, to demonstrate to the members of Congress the nature and value of these objects, and their practical usefulness."

The committee also reported that the plan of a Medical Register of the New England States met their approval, but that if any pecuniary responsibility was to be incurred, it should be referred

to the County Societies. No further action was taken upon the subject.

The following amendments to the by-laws were reported to the next convention:

All remarks made in the discussion of any subject shall be committed to writing by the person making them either before or immediately after they are made. The Secretary shall provide suitable tablets at the expense of the society for this purpose.

No voluntary paper shall be published which has not been read before some County Medical Association, and recommended by them.

Each County Society shall appoint one of the Fellows elected to serve as a member of the nominating committee, and another as his alternate to act in his absence only.

The following by-law was passed:

Each County Society shall elect as many alternates as they elect Fellows, who shall act in case of absence of their primaries.

The object of this is to facilitate the work of the convention and enable a delegation from each of the counties to be present and participate in all business transacted.

Upon motion of Dr. Chamberlain it was voted

That the Secretary be requested to memorialize the legislature to pass a law requiring that all patent and proprietary medicines sold in this State shall have the working formula by which they are made, plainly and legibly printed upon the label, and none allowed to be sold that do not comply with this provision; and that a heavy fine be imposed in case analysis shows any essential deviation from the formula, the expense of the analysis in such case to be paid by the manufacturer.

The committee on the recommendations of the President, reported as follows .

Your committee appointed to take into consideration the recommendations made by you in your address to-day have the honor to report as follows :

In the matter of making Ex-Presidents permanent Fellows, we would suggest that the By-laws of the Society be so altered as to accomplish this result. In reference to a permanent Secretary, we heartily concur in this recommendation, and suggest such action by this Society as shall bring about this result, and also recommend that fifty dollars be paid the Secretary, and twenty-five dollars for Treasurer.

In reference to increasing the number of Fellows, that all counties that have a membership of twenty-five be entitled to five Fellows each, and all under twenty-five, three each. All societies having a membership of over twenty-five be entitled to one fellow additional for

every twenty members or fraction thereof. We would also recommend that section three of Chapter V be repealed.

W. C. WILE, M.D.

W. H. CARMALT, M.D.

CHAS. GARDINER, M.D.

This would result as follows :

Hartford,	.	.	.	.	.	.	4-9
New Haven,	.	.	.	.	.	.	6-11
New Loudon,	.	.	.	.	.	.	1-6
Fairfield,	.	.	.	.	.	.	3-8
Windham,	.	.	.	.	.	.	1-6
Litchfield,	.	.	.	.	.	.	1-6
Middlesex,	.	.	.	.	.	.	1-6
Tolland,	.	.	.	.	.	.	—3
							—
							55
Now,	.	.	.	.	.	.	38
							—
Increase of	.	.	.	.	.	.	17

The report of the committee was accepted and the committee discharged. Their recommendations will be acted on next year.

The Committee on Examination reported through their Secretary, Dr. J. H. Grannis. On motion of Dr. Chamberlain the report was referred to the Committee of Publication. (See Appendix A.)

The Committee appointed last year on the Revision of the Code of Ethics reported as follows :

Mr. President and Fellows of the Connecticut Medical Society: Your committee believe that the welfare of the Medical Profession will be best promoted by a faithful, honest, and honorable observance of the Code of Ethics as established by the American Medical Association.

We furthermore believe that if at any time in the future it may be deemed expedient to change, or alter the code in any way, that the proper place to make the change is in its home, viz.: the meetings of the American Medical Association. We therefore recommend that the whole subject be laid upon the table.

ELIJAH C. KINNEY, M.D.,	} Committee.
C. A. LINDSLEY, M.D.,	
GEO. W. AVERY, M.D.,	

The report was accepted and the committee discharged.

The convention then adjourned to meet the fourth Wednesday in May, 1884, at New Haven, or when called to a special session by the President.

C. W. CHAMBERLAIN, M.D.,

Secretary.

THE ANNUAL CONVENTION.

THURSDAY, May 24th.

The second day's exercises commenced promptly at nine, with the report of the Secretary, Dr. C. W. Chamberlain, of the matters of interest in the history of the Society for the past year. In retiring from office, a brief retrospect of the past eight years was included, and some contrasts made between the state of affairs then and now.

SECRETARY'S REPORT.

The year has been like its immediate predecessor, one of uninterrupted prosperity; the gain in numbers has been about the same, and the gain in finances as marked in many respects as that of last year. There are now no arrearages, and such a state of affairs once inaugurated will in all probability continue, as it is much harder to secure than to maintain, although the latter will give the County Clerks full occupation for awhile until the habit of prompt payments becomes generally established. Great credit is due the County Clerks for their faithful endeavors.

The prosperity of the Society depends largely upon the faithfulness and zeal of the Clerks of the County Societies. Indifference here, and negligence, soon throws the financial affairs into almost inextricable confusion, and the same methods are transmitted from one clerk to another. On the contrary, if a clerk by persistent effort secures full payments during his term of office, his successor will endeavor to accomplish as much. It is thus that the custom of full payments has been maintained so long in three of the counties, and introduced once at least in all. The work is hard and thankless to a certain extent, but efficient clerks should be retained as long as they will serve, and they should consult the best interests of the Society by long terms of office. The only drawback to the general prosperity which has characterized this year has been the large number lost by death. The death rate is considerably above the average of that for the last eight years. The whole number of deaths among the members of the Society reported in the State since our last session is fourteen. We also lose one honorary member, Dr. Wm. Pierson Sr., of Orange, New Jersey. The losses by death include several of the oldest and most active members of the society; some that have honored the

profession and left behind them enduring monuments of the results of their labors. The grateful memory of a well spent life; an unspotted name is the common heritage of nearly all; and if misfortune overtook some of our numbers, and their lives went out in darkness leaving clouded names, we can derive a sad warning from their fate, and point with just pride to the comparatively small number of our profession that require the charity of silence. The well known and honored names among the dead of the year sadly reminds us of the irreparable losses we have sustained. There are many like Dr. G. H. Preston, whose cheery presence and hearty greetings will long be missed at these gatherings—many who were among the most active and earnest of our members. The name of Dr. George B. Hawley is well known in connection with humanitarian enterprises, and is commemorated for all time in the Hartford Hospital and Old People's Home, which owe their existence to his untiring energy. The fame of Dr. E. P. Bennett as a surgeon was not limited by the bounds of his own State nor native land.

The names of those that have died are as follows:

Dr. Wm. Pierson Sr., Orange, New Jersey, Honorary Member; Marcus L. Fiske, M.D., Warehouse Point; George A. Hurlburt, M.D., Buckingham; George B. Hawley, M.D., W. H. Tremaine, M.D., Hartford; Francis F. Allen, M.D., Granby; Mason Manning, M.D., Mystic; E. P. Bennett, M.D., Danbury; W. H. Trowbridge, M.D., Stamford; F. V. Brush, M.D., Norwalk; E. Huntington, M.D., Windham; Garry A. Miner, M.D., Morris; B. S. Thompson, M.D., Salisbury; C. H. Gilbert, M.D., Morris; G. H. Preston, M.D., Tolland.

The new members outnumber all our losses by death, removals, and other changes, so that there is a net gain in membership of about ten. There are thirty-one new members distributed among the respective counties, as follows: Hartford, twelve; New Haven, five; New London, Fairfield, Windham, three each; Middlesex, one; Litchfield and Tolland, two.

The following is the list, with dates and places of graduation and post-office addresses:

NEW MEMBERS.

- Edward K. Root, M.D., Univ. N. Y., 1879, Hartford.
 P. H. Ingalls, M.D., College of Physicians and Surgeons, N. Y.,
 1881, Hartford.
 L. A. Davison, M.D., Univ. N. Y., 1882, Hartford.
 John Howard, M.D., Dartmouth, 1881, Hartford.
 Charles A. Fox, M.D., College of Physicians and Surgeons,
 N. Y. 1881, Hartford.
 A. Abrams, M.D., Albany, 1881, Hartford.
 F. I. Smith, M.D., Yale, 1882, Hartford.
 Geo. E. Markham, M.D., Univ. N. Y., 1882, Burnside.
 Roswell Fox, M.D., Univ. N. Y., 1847, Wethersfield.
 G. J. Holmes, M.D., Albany, 1882, New Britain.
 Geo. W. Edwards, M.D., Univ. N. Y., 1862, Grauby.
 Arnold Eberg, M.D., Dartmouth, 1879, Simsbury.
 John F. Luby, M.D., College of Physicians and Surgeons, N. Y.,
 1878, New Haven.
 Charles H. French, M.D., Bellevue Hospital Medical College,
 1880, Waterbury.
 James Ramsey, M.D., Bellevue Hospital Medical College, 1879,
 Waterbury.
 Charles S. Rodman, M.D., College of Physicians and Surgeons,
 N. Y., 1868, Waterbury.
 Edward R. Roberts, M.D., Yale, 1880, Fair Haven.
 H. P. Smith, M.D., College of Physicians and Surgeons, N. Y.,
 Norwich.
 A. L. Robinson, College of Physicians and Surgeons, Baltimore,
 Norwich.
 A. T. Douglass, M.D., Univ. N. Y., 1849, New London.
 W. A. DeForest, M.D., Univ. N. Y., 1869, Bridgeport.
 W. H. Donaldson, M.D., Univ. N. Y., 1881, Bridgeport.
 J. J. Berry, M.D., Univ. N. Y., 1878, South Norwalk.
 Nathaniel Hibbard, M.D., Harvard, 1882, Danielsonville.
 W. Foster Warren, M.D., Harvard, 1882, Putnam.
 H. M. Bracken, M.D., College of Physicians and Surgeons, N. Y.,
 1877, also Licentiate Royal College Surgeons, Edinburg,
 1879, Thompson.
 S. G. Ketchum, M.D., Univ. Vt., 1880, Woodbury.
 C. O. Belden, M.D., College of Physicians and Surgeons, N. Y.,
 1883, Litchfield.

W. M. Knowlton, M.D., Univ. Vt., 1880, Moodus.
T. M. Rockwell, M.D., Univ. N. Y., 1881, Rockville.
William H. Clark, M.D., Univ. N. Y., 1882, Tolland.

They are graduates of the following Medical Colleges: University of New York, 11; College of Physicians and Surgeons, N. Y., 7; College of Physicians and Surgeons, Baltimore, 1; Yale, 2; Harvard, 2; University of Vermont, 2; Dartmouth, 2; Albany, 2; Bellevue, 2. The Society now has 460 members, in round numbers.

The history of such legislation as the Society is especially interested in, has already been given. It is gratifying to note the increased influence of the Society upon public affairs, and the attention subjects receive in these conventions, upon which its voice should be heard. If all measures we sanction are well and wisely considered and carefully discussed before they are presented, our influence will increase. The coroner act is printed by request, and in the appendix will be found the act passed a few years since concerning itinerant practitioners. This is also printed by request of many who desire ready access to its provisions. There have been so many changes in the by-laws, that it was thought desirable to reprint them as they now exist, and also the charter, for reference in the discussions, should any changes be proposed; these will be found in the appendix. I would recommend as a new by-law that once in four years the tabular history of the society from 1875, with the list of presidents from the organization of the society, be printed with the charter and by-laws and code of ethics, and a separate edition struck off enough to supply all new members for the next three years, and that the secretary be directed to send to every new member a copy. I have done this for the past three years, since 1879, and found the results warrant a continuance of the plan which I had intended formally to propose to the convention.

In retiring from the position of secretary of this Society, which I have held by your kindness for the past eight years, I desire to express my appreciation of the support that I have invariably received in all my efforts for the welfare of the Society. I have endeavored to the best of my ability to perform the duties of the office faithfully for the best interests of the Society. The history of these years has been a stirring one, and questions have been forced upon us for decision that would have been avoided had

it been possible. The Society should never allow its influence to be used to the detriment of any of its members, nor should it be the organ of any faction, to secure the favorite plans of the few. The subjects upon which its influence is exerted should be such as commend themselves to the profession generally and are of acknowledged value. It is no reproach that it is conservative; it should be, and can afford to wait for the verdict of time before endorsing any scheme or project.

That the duties of secretary are arduous as well as responsible, requires little reflection to perceive; the general guidance of the affairs of the Society devolves upon him,—as he alone as a rule keeps all its affairs in mind, and as a matter of interest as well as of duty, learns carefully from every available source the topics that are engaging the attention of the profession the world over. He is expected so to arrange the details of the Society's work, that the business shall all be transacted in an orderly way. By virtue of his office he is editor-in-chief of the transactions, in itself no small duty. The mischances of editors have been so graphically presented that I shall not attempt the task of recounting them; moreover he is chief literary critic, and thus responsible for all errors. The woes of the secretary's position have been so nicely set forth in brief by a worthy member of our profession, that I am tempted to quote:

“The secretary is held responsible for all errors and mischances; he is repeatedly reminded of each and every mistake with all the varying gradès of emphasis, and a heavy draft upon the adjectives, with an occasional interjectional expression, if it might be so termed. For appreciation of his successes he must for the most part look to impartial critics outside of the society he serves. While blame is poured upon his devoted head, as well as fault-finding in unstinted measure, of praise he receives no whit for the most pains-taking endeavor.”

There is much truth in these words, partly as a matter of necessity. Errors are brought to his attention that they may be corrected, while the good work is considered as simply the proper performance of duty. During these eight years I have formed very many pleasant acquaintances, and some friendships that are so strong and lasting that they make the petty discomforts of the place seem very small indeed. Many of the pleasantest associations of my life are connected with these meetings and the com-

panionships that have thus been rendered possible. That I have offended some, and incurred the ill-will of a very few, is a matter of necessity as this world is constituted. It is the saying of a witty Frenchman, that "it is only the inefficient that have no enemies." While I have to ask your kind forgetfulness of my mistakes, I must at the same time thank the Society for the cordial support I have so generally received throughout my whole term of service. I have both directly and indirectly endeavored by all means in my power to advance the interests of the Society, and make it a power in the State. We can make our influence felt by an intelligent watchfulness of the interests of the people—by presenting carefully considered legislative measures to our law-makers upon all subjects upon which the knowledge of the physician is indispensable. The physician does not occupy his true place in education, nor in the State, and it is only our own supineness or worse that we have to blame for the continuance of this state of affairs. Our educational methods should be based upon the physiological development of body and mind, instead of the theories of some philosopher, however fine spun they are. Our penal, reformatory, and charitable institutions should, in their planning and management, place the physician in an entirely different relation, where the principles of medical jurisprudence, the laws of body and mind, in a word, sociology, should have due attention. There has already been one important move made in the right direction, in the new coroner law, which recognizes the value of the services that the doctor alone can give the State, and places him where he can perform them, and properly remunerates him. Not to be too prolix, there are many places that should be filled by physicians, who alone can intelligently perform their duties. Thus the registrar of births, marriages, and deaths should be a doctor. It is amusing to see the way in which the laity wrestle with the technical terms of disease, but ceases to be so when the social interests involved are considered. The time will, and must come, if the world is to make progress, when the doctor will take his true place in public affairs. It is in the accomplishment of such objects as these that we can gain influence and accomplish results that will be of inestimable value to the State. We would thus do more to abolish quackery and pretension than by a dozen laws.

The interest in the Society and the zeal of members have apparently greatly increased during the eight years of my term of service.

Death has removed many who were made members by law and hence took little interest in its meetings, while the new members have been active and interested. Time has healed many grievances, and there is now a state of general harmony and good fellowship. The average attendance has fully doubled, and the amount of literary material offered results often in an embarrassment of riches. The President's idea of a committee to report on new remedies is a good one, and one that will bear extension. A committee to report on the advances and improvements in surgery, one on the practice of medicine, and the like, would add new interest to our gatherings.

During this period of eight years there have been eighty-six deaths, and an average of thirty two new members each year, so that deducting all losses there remains a net gain of a little over a hundred members. As elsewhere stated the Society now numbers four hundred and sixty; the average net gain for the past few years has been ten. The death rate, it is hoped, will decline, but the average age of the decedents has been over sixty, an advance over the usual estimate in New England, where the average age of physicians at death is usually stated as fifty-eight. Probably if a long series of years be taken the average would more nearly correspond.

In now formally closing my official duties, I desire to thank the Society for the cordial support I have uniformly received, and especially for the expressions of regret at their close. It is my earnest hope that the Society is but entering upon a long and progressive period of activity and progress that shall result in advancing the influence and standing of the profession throughout the State.

C. W. CHAMBERLAIN, M.D.

The Secretary elect, Dr. S. B. St. John of Hartford, then took his position at the Secretary's desk.

Prof. M. C. White offered the following:

Resolved: That the sincere thanks of this convention are hereby tendered to Dr. Chamberlain for his long, faithful, and arduous services for eight years as Secretary of the Connecticut Medical Society.

Dr. W. C. Wile spoke of the promptness with which the Transactions had been published by Dr. Chamberlain, and the high standard of literary excellence attained. The value of these yearly publications has been recognized by the Medical Press, which has received our publications in the most complimentary manner, as containing valuable contributions to medical literature.

He offered the following as a substitute for the resolution of Prof. White

Resolved: That a committee of three be appointed by the Chair to prepare suitable resolutions expressing the thanks of this Society for the valuable services rendered by Dr. C. W. Chamberlain, for eight years its honored Secretary. That the committee be empowered to have the same suitably engraved, framed, and presented to Dr. Chamberlain as a slight appreciation of the value of his services to the Society.

This resolution was promptly seconded, and accepted by Prof. White, who withdrew his resolution, and the resolution of Dr. Wile passed without a negative vote. The President announced the following as the committee to execute the provisions of this resolution: Drs. W. C. Wile, M. C. Hazen, and Geo. W. Porter.

The President elect, Dr. E. B. Nye of Middletown, then took the chair, and the retiring President, Dr. Wm. G. Brownson, presented the annual address, which this year was in a poetical form; the innovation however met with universal approval. He selected for his subject "The Country Doctor." He was listened to very attentively and interrupted frequently with applause as some hit struck home to the appreciation of his listeners, to many of whom the experiences were very familiar. At its conclusion the following resolution offered by Dr. Geo. L. Porter was passed unanimously, upon the subsidence of the lengthened applause that was given the Doctor at the close of his humorous and faithful presentation of the peculiar trials and the rewards that fall to the lot of the Country Doctor:

Resolved: That the thanks of the Society be extended to Dr. Brownson for his classical and most interesting poetical address, and that a copy be requested for publication.

The President then introduced the following delegates to the convention, who addressed the society briefly, and presented the greetings of their societies.

Dr. G. J. Townsend from the Massachusetts Medical Society, Drs. H. G. Browning and Charles O. Leary from the Rhode Island Medical Society. Dr. T. D. Crothers presented credentials as a delegate from the American Association for the cure of Inebriates. He presented a paper on Inebriate Automatism, but as he was absent when its reading was called for, it was referred to the committee of publication.

The Secretary, Dr. St. John, then read the following telegram:

NEW BRUNSWICK, N. J., May 23, 188.

TO CORRESPONDING SECRETARY,

Connecticut State Medical Society at Annual Meeting.

Regret exceedingly that professional engagements prevent my attendance; if my associate delegate is not present please convey to your Society the hearty salutations of Medical Society of New Jersey, with expression of our hope that our society may have pleasure of welcoming your delegates at our annual meetings.

D. C. ENGLISH.

Dr. M. H. Henry and Dr. G. J. Sawyer of New York, were invited to be the guests of the society. There was no response to the call for reports from delegates from this society to other medical organizations.

The Secretary reported that he had received no reply from the dissertator, and the alternate had not been notified that the duty would devolve upon him.

Dr. Wainwright then presented his report as Chairman of the Committee on Matters of Professional Interest in the State; the reading of cases of interest he deferred until later in the day with the consent of the society; no organized effort had been made to secure reports on any special subjects.

Prof. M. C. White then exhibited to the society a micro-spectroscope which contained improvements of his invention, and presented a paper on the subject, in which the instrument was described and its points compared with other instruments.

The thanks of the convention were voted to Prof. White, and a copy of his paper requested for publication.

Dr. Wile related a case of extirpation of the entire uterus, performed as a forlorn hope. The patient survived five days. He also related a case of resection of the femur in a man aged forty-five, who had hip-joint disease when a boy, which was cured. He a year ago became paraplegic, and was treated for spinal myelitis for three months without relief, in New York, by the best specialists there. When he returned Dr. Wile discovered iliac abscess, and when permitted to operate found the head of the femur absorbed and a burrowing abscess reaching to the base of the scapula. After the operation the patient made a good recovery.

Dr. Burke related a successful case of complete extirpation of the uterus for cancer, and exhibited an instrument for placing the stitches high up without dragging down the broad ligament, which he considered one of the great dangers in this operation.

Dr. M. H. Henry then, by request of the Society, described the operation for varicocele which bears his name, with an exhibition and description of his clamp.

The thanks of the society were voted to Dr. Henry for his interesting description.

Dr. Chamberlain reported briefly two cases where this method had been successfully used in aggravated cases by Dr. Geo. C. Jarvis of Hartford. These added two more to the 250 successive operations reported by Dr. Henry, each of which had been completely successful.

Dr. Geo. L. Parmele of Hartford, then read an essay on "Some Points in Oral Surgery of Interest to the General Practitioner," in which he discussed the relations of diseased and imperfect teeth to digestive disorders and dyspepsia, and their reflex connection with other nervous diseases besides neuralgia, which was the only one generally recognized. The improvements in general health resulting from the modern scientific treatment of the teeth were also graphically presented.

The thanks of the society were voted Dr. Parmele for his instructive and interesting essay, and a copy was requested for publication. The paper was discussed to some extent, and questions asked upon several subjects presented.

Dr. W. H. Holmes of Waterbury, then read an essay on "Aspiration in Pleurisy," with illustrative cases showing the value of the procedure. The pathology of the disease was sufficiently discussed to show the dangers that result from delay or neglect to aspirate.

The thanks of the convention were voted Dr. Holmes for his able and interesting essay, and a copy requested for publication.

Dr. F. N. Braman of New London, presented a very able and original essay on "Complications in Labor," among others describing version under difficulties, in which he advocated the use of the fillet around the body of the child as giving complete control of the body, and thus rendering an essential assistance in rotation. This procedure is original with Dr. Braman, as it is not described in any of the standard authors.

The essay was discussed by Prof. Beckwith, who, while granting to Dr. Braman the credit of the use of the fillet around the body, thought that it had no advantages over the use of the fillet around the shoulders as described by Dr. Barnes. The child's body would stand only a certain amount of traction, and at much less than could be exerted by the fillet around the shoulders, the head could be separated from the body. In all cases where death ensued from peritonitis after labor, he thought there was injury to some part of the maternal tissues that allowed absorption, and that such deaths were not caused by the duration of the labor unless there was some lesion.

Dr. Braman said that he did not use the fillet to obtain a greater amount of traction, but to obtain complete control of the body of the child, and to assist in rotation, which it accomplished better than any other device.

The thanks of the convention were voted to Dr. Braman for his interesting and instructive essay, and a copy was requested for publication.

Dr. A. Beardsley of Birmingham, then read a paper on the "Treatment of Malarial Fever," in which he advocated the use of an alterative purgative, equal parts of aloes, calomel, and capsicum, boneset tea freely several times a day, and an aromatic tonic. This seems like a return to first principles, but the doctor writes from a wide experience, and claims success where quinine pushed to toleration had failed to cure.

The thanks of the Society were voted Dr. Beardsley for his

valuable paper, and it was referred to the Committee on Publication.

Dr. St. John then moved that the remaining papers be read by title and referred to the Committee on Publication. It was so voted.

Dr. G. W. Russell spoke of the unsatisfactory condition of the early records of the Society, the danger that they might be lost, and the difficulty of securing any published copies, and offered the following resolution, which was passed unanimously :

Resolved : That the Secretary be instructed to print the transactions and proceedings of this Society for the first twenty-five years, and distribute the same to the members.

He offered to contribute one hundred dollars towards the expense of such publication.

Dr. Lewis of Hartford, stated that he had a complete set of the transactions of the Society, the only one in existence that he knew of, and that he would gladly lend such as could not be otherwise obtained if the Secretary needed them.

Dr. Chamberlain spoke of the difficulty of obtaining any of the transactions earlier than 1830, and stated that it was desirable that the valuable literary papers and addresses connected with the early years of the Society should be republished. From 1830 to 1860, sets could be obtained, although with difficulty. That in the Secretary's office commences at 1830, while there is an incomplete set in the Treasurer's office, lacking several years, ten at least. He spoke of the unsuccessful efforts he had made to secure copies of the earlier years.

Prof. White stated that the set in the Secretary's office had been secured mainly by him; that is, such of the earlier years as there were. He had the numbers for several of the earlier years which he had kept while endeavoring to complete the set, but he intended giving them to the Society, and should do so when they were needed, whether complete or not.

After some farther discussion, Dr. Geo. L. Porter offered the following resolution, which was passed unanimately :

Resolved : That the Secretary of the State Society be directed to correspond with the Secretary of each County Society in regard to publishing the literary papers and transactions of the Society of the early years until 1830, and to learn if each County Society will share the

expense of the same, and shall report the answers at the next convention.

The report of the Committee to Nominate Essayists was received, and accepted upon motion of Dr. St. John, and the committee discharged.

The following were those elected as reported by the committee:

W. A. M. Wainwright, M.D., Hartford County.

Walter H. Holmes, M.D., New Haven County.

F. M. Wilson, M.D., Fairfield County.

Chas. N. Brayton, M.D., New London County.

Wm. A. Lewis, M.D., Windham County.

H. W. Shove, M.D., Litchfield County.

R. W. Mathewson, M.D., Middlesex County.

E. K. Leonard, M.D., Tolland County.

Respectfully submitted,

GEO. F. LEWIS,

R. STRICKLAND.

The Society then adjourned for the annual dinner at the United States Hotel.

S. B. ST. JOHN, M.D., *Secretary.*

PRESIDENT'S ADDRESS.

THE COUNTRY DOCTOR.

WILLIAM G. BROWNSON, M.D., NEW CANAAN.

Fellows and Brethren of our commonwealth,
The trusted guardians of the lives and health
Of half a million of our noble race,
Accept the cordial greeting which the place
And the occasion bid us here extend,
Where noble aims and nobler spirits blend.

How fitting to our chosen mission, here
To meet for counsel each recurring year;
To garner up for use the ripened fruit
Of past experience; to wisely suit
The rich and varied lessons of the past
To modern methods, multiform and vast.
How suited to the needs of men of care
To slip the burdens which they daily bear;
To deftly smooth a furrow from the brow,
Refresh each heart, renew each sacred vow;
To stay the whitening of a single hair
On heads too early silvered o'er by care;
To mirror back the smile we here extend,
And cross the palm with many a trusted friend.

By virtue of the office which I bear,
In the behalf of those whose trusts I share,
A hearty welcome let me here extend
To every Fellow, Delegate, and Friend.

And now what shall I say,—what can I say
Suited to the occasion and the day?
Among my auditors are hoary men
Already past their three score years and ten,
Who long have honored their respective spheres;
Riper in wisdom than in gathered years.

College professors grace our festal board,
 Whose brains and libraries are amply stored;
 The learned critics who unravel threads
 That sorely puzzle many anxious heads,—
 Our happy specialists with scarce a flaw,
 Experts in counsel and in courts of law;
 All these, whose rare attainments justly claim
 Our grateful recognition of their fame,
 Need not our praise; their names and deeds command
 Profound respect throughout our native land.
 Another class I see, but few are here,
 Though adding to our numbers year by year,
 Attentive listeners while others teach,
 Whose mission is to practice not to preach,
 The privates in our noble army band,—
 The country doctors scattered through the land,
 Who bear the knapsack, catch the fiercest fire;
 For them I speak,—the rest need not retire.

Fresh from the college halls our hero comes
 To enter on his work in rural homes.
 His recent past seems like a fitful dream;
 The weeks of rigid application teem
 With memories no future can efface,
 No words express, no pencil fitly trace.
 The chambers of his memory have been pressed
 For lodgment of the knowledge he possessed;
 Knowledge of varied kind, diffuse, abstract,
 From fine spun theory to settled fact;
 Chemical formulas, hygienic laws,
 The limits of disease, its hidden cause,
 Medical jurisprudence stale and dry
 As skeletons of bare anatomy,
 The college quiz and lectures by the score
 Embodied in a dozen books or more,—
 All these, by specious cramming, he must gain,
 And reproduce his parchment to obtain.
 The ordeal of examination past,
 "Accepted," greets his weary eyes at last;
 Little he cares that purse is empty now,
 A glow of perfect joy rests on his brow.

Rejoice with him who finds a blissful day
 To ease the burden of life's devious way;
 A ray of light and hope to gild the road
 And pierce the veil that shrouds the last abode.
 Our young M.D. decides to settle down
 For a few years in a small country town,
 Hoping, by patient toil, ere long to gain
 The richer field to which his hopes attain.

You who have walked the road he enters here
 With careful tread, alternate hope and fear,
 Each step observed by many eager eyes
 That note too soon his frequent fallacies,—
 You who have known in other days with me
 How blessed was the word of sympathy,
 Have known and felt when weary and distressed,
 The need of strength, encouragement, and rest,—
 Need but the mirror, not the photograph,
 To catch at once the outline of the path.

The months pass on and gather into years;
 With each new day some new demand appears;
 Demands for knowledge he has not been taught,
 Nor read in books, nor gleaned from modern thought.
 As in the countless millions of the earth,
 From present time back to creation's birth,
 No two are found alike in every part,
 In form and feature, gifts of mind and heart,
 So in our ills, the skillful watcher finds
 As wide divergence as in forms or minds;
 In chronic ones he seeks to know the cause,
 And finds it hidden deep in nature's laws;
 Each chapter of life's history must be
 Consulted ere he finds the remedy,
 Mixed and administered with studied pains,
 As brilliant Opie mixed his paints—with brains.

When we consider all the slender strings
 From which the melody or discord springs,

When life's frail harp is touched by unseen hands,—
 How shall we wisely answer the demands;
 Touch the right chord, proffer the needed boon,
 And all the harmonies of life attune?

The chains of circumstance, with fetters bind
 Too oft the best endeavors of the mind.
 We seek a remedy for human ill,
 Where neither pharmacist's nor doctor's skill
 Finds the elixir that can stay the drain
 Of wasted energy of nerve and brain.
 Unfortunate surroundings it may be,
 Or some harsh discord in the family,
 Diseased inheritance that poisons life
 And fills its days with bitterness and strife,—
 Or, worse than all, what hundreds of us see
 In many homes, a grinding poverty;
 Mothers of babes anæmic, underfed
 And overworked to gain their scanty bread;—
 What wonder if we often fail to please
 Ourselves, or bring to others strength and ease;
 What wonder if we envy our compeers
 Whose city practice through a score of years
 Leaves them the care of but the favored few;
 With ample means, and readiness to do
 The will of the attendant when expressed,
 Either for needed change or needed rest.
 Some healing waters flow in distant lands,—
 To test their sovereign virtues, he demands
 An extra nurse, a trip across the sea,
 A well filled purse, congenial company,
 A cottage by the sea, or mountain air,
 Release from labor and relief from care,
 How wide the contrasts in our earthly lot,
 How brief the pilgrimage, how soon forgot.

The lessons of experience, as taught
 In country practice, oft are dearly bought.
 The modest worker in a sterile field,
 Needing the scanty harvest it may yield,

Sometimes from doubt, sometimes from anxious fear,
Wishes an able counsellor were near.
An only child, within whose tender life
Center the fondest hopes of husband, wife
And many friends, seems on the verge of death;
Convulsed with pain, with fitful, rapid breath,
Clenched hands, eyes sunken, nostrils stretching wide,—
He scarce can count the pulse's hasty stride;
He looks at his thermometer amazed,
Its column to a frightful figure raised.
Ah, you and I have felt his anxious fear,
And wished some able counsellor were near
To aid in such extremity, or bear
Of such responsibility a share.
No time to lose, he summons to his aid
His nearest rival; time is quickly made,
And, Jehu like, with foaming steed he drives,
And at the moment specified arrives.
In manner brusque, pompous in air and style,
He greets his brother with the blandest smile,
With new-found friends shakes hands with relish keen,
Happy to see them, happier to be seen.
His conversation he directs to these,
With studied effort to attract and please;
Tells of an anxious case he had last night,
Which by his skill is coming out all right;
Details his treatment in a learned way,
Bold and heroic as we sometimes say;
Consults his watch, and softly names the time
When he must see a case with Doctor Prime;
A city lady, wealthy and refined,
Attractive both in person and in mind.
His fine impressions made, he condescends
To interview the doctor and the friends;
And, ere he sees the case, states his belief
That he can soon suggest a prompt relief.
He quickly scans the case, and feigns to see
At once the lesion and the remedy;
Tells of a dozen cases he has had
Within a year with symptoms quite as bad.

And thus this farce of consultation ends;
What further he discloses to the friends
We ne'er shall know; but somehow it transpires,
He gets the case,—his brother soon retires.

The quiet meditations of our friend
Upon this strange proceeding and its end,
Are like the winds across the dreary plain;
Now harsh and chill, now soft and mild again.
He feels that rank injustice has been done;
He asked for bread, he has received a stone;
He fain would hurl it back, and promptly say,
If called to counsel at some future day,
This wily brother he would sooner see
In everlasting infelicity.

His purse and reputation feel the strain,
His honest heart and character remain.
With firm resolve to do as best he may
The arduous duties of each coming day
He learns to wait, assured that in the end,
He is not poor whose conscience is his friend.

Turn now, and for a moment, let us trace
In happier mood a second anxious case.
Our modest friend, who does not know it all,
Again needs counsel; and within his call,
Retiring for a time for calm repose,
Is one of whose exalted rank he knows.
He thinks an operation must be done;
He calls upon his friend,—the kindly tone
Of cordial welcome which the good man gives,
In part his keen solicitude relieves.
Together to the bedside they repair;
Together scan the case with patient care;
Together then for conference they retire
As friend with friend, one aim and one desire.
To save the case from an untimely end
The surgeon's knife its services must lend,
And, all arranged, our veteran takes his place
Simply as an assistant in the case.

To wield the knife he modestly declines,—
 To aid his younger brother he designs;
 His very presence nerves the timorous hand
 To steady work and ready self-command.
 With warm congratulations he proceeds;
 A hint and a suggestion as he needs
 In undertone, so guide, he scarcely knows
 That to his blade the ripper judgment goes.
 Relief obtained, success assured, they share
 The honored garlands which the victors wear;
 Rejoicing friends their gratitude express
 In other ways than simple thankfulness;
 Softly aside our learned counsel pays
 His younger friend the tribute of his praise,
 Asks him to call and question if need be,
 And slips into his hand his handsome fee.

If there be happiness for mortals here,
 A sweet symposium where care and fear
 May not intrude, our brother now can feel
 A heaven,—where thieves do not break through nor steal.

And thus alternate light and shadow fall
 Across the checkered pathway of us all.
 Our lives are like the volumes on our shelves;
 Their style and binding show our outer selves;
 The gilt or plainer dress our rank or birth;
 Still but the printed page can give them worth.

How may we see ourselves, who backward turn
 The pages of our life-book, and discern
 The country doctor of our boyhood days,
 With foes and friends to censure or to praise.
 In saddle or in sulky brown and grim,
 The storm and darkness were alike to him,—
 Through weary miles his keen anxiety
 And faithful horse, his only company;
 His saddle-bags and dusty garb might tell,
 Each aged sire and schoolboy knew him well,
 As through the window or the open door,
 They watched his coming at th' appointed hour.

When coveted success had eased his brain,
He oft could feel the force of the refrain.

“Three faces wears the doctor; when first sought,
An angel's; and a God's, the cure half wrought;
But when, the cure complete, he seeks his fee,
The devil is less terrible than he.”

'Twas his to know betimes when he had done
Most faithful service, he had scarce begun
Rejoicing, ere the shafts of malice dread,
Like hailstones fell on his defenceless head.
Each day he passed some who, from jealousy,
Malice, or spite, would do him injury;
Each day he stood beside some prostrate form,
Whose outstretched hand and trusting look gave warm
And kindly welcome, while he sought to show
The brighter side and hide the threatened woe.
'Twas his to know the rapture of success;
'Twas his to feel the pangs of bitterness,
When, baffled, he must stand with bated breath,
Dumb and confounded, face to face with death.

We take their places, and survey with pride
The well-earned laurels they have laid aside.
If their facilities were less than ours,
We gain advantage, not by added powers
For better service, but by nobler deeds,—
More self-devotion to our fellows' needs.
Who does his best within his humble field
Has gathered honors, which he need not yield
To man or angel; faithful in few things,
He wears the crown which faithful service brings.
None wears another's armor, each his own;
Ours will be measured when our work is done.

The prince of epics from his classic vale
Beguiles the student with a pleasing tale.
With festive games the populace to please,
In memory of his father Anchises,
Æneas raises with his mighty hand
A lofty mast, round which the people stand;

And on its top, held by a slender string,
 There sits a timorous dove with folded wing.
 He now invites the archers standing by
 To open contest for the mastery.
 Four heed the invitation, and prepare
 The plaudits and the offered gifts to share.
 Then from the well drawn bow an arrow flies,
 As lightning cleaves its pathway through the skies;
 The quivering mast and flapping wings proclaim
 The skilled precision of the archer's aim;
 Beneath the captive's feet, still pinioned fast,
 The arrow-head lies buried in the mast.

Then ardent Mnestheus next, aiming on high,
 Directs alike his arrow and his eye;
 His arrow cuts the cord,—the captive flees
 Toward the dark clouds, high on the southern breeze.
 Quickly Eurytion holds his ready bow,
 Calls his lost brother to attest his vow,
 Now spied the dove, joyful in azure vault,
 His whizzing arrow makes the last assault;
 Transfixed, she leaves her life within the sky,
 Descending 'mid the shouts of victory,
 Down, down to earth, now pinioned fast and warm,
 The fatal arrow and the lifeless form.

But one remains; the aged archer stands
 Viewing the prizes earned by other hands.
 All seems accomplished; yet Acestes next
 His arrow toward the heavens straightway directs;
 It speeds its way athwart the liquid clouds,
 When, lo! a trail of fire its path enshrouds;
 On blazing wings it spans the arch on high,
 Like shooting stars unfastened from the sky,
 Till quite consumed before their wondering eyes,
 Into the subtle air it vanishes.

Sicilians and Trojans dumb struck stand,
 While brave Æneas issues his command:
 "The gods, O father, by this omen rare,
 Design that you the diadem shall wear;

While others nobly earned, and shall receive,
The prizes which with gratitude we give,
Take to thyself as victor over all,
The laurel wreath and famed Anchises' bowl."
All victors, yet the multitude proclaim,
"The prize is his whose arrow caught the flame";
With one accord to him the prize they yield,
Who bore it from the well contested field.

As then, so now, and through all future time,
Each grand achievement touches the sublime;
Within each field of learned labor lies,
For all who will contest, a fitting prize;
The higher flight demands the higher aim,—
'Tis only these that catch the heavenly flame.

Aiming and striving thus, still aiming high,
Till backward we behold the radiant sky,
Still onward, may we reach the golden way,
The brighter light of an eternal day.

REPORT
OF COMMITTEE ON MATTERS OF PROFESSIONAL
INTEREST IN THE STATE.

The Committee on Matters of Professional Interest respectfully present the following reports from County Societies, and cases of interest.

W. A. M. WAINWRIGHT, M.D.,
H. S. FULLER, M.D.,
GEO. F. LEWIS, M.D.

HARTFORD COUNTY.

W. A. M. WAINWRIGHT, M.D., *Reporter of Matters of Professional Interest for the State:*

DEAR SIR—The following questions were sent to the members of the Hartford County Medical Society:

- (1.) How many cases of scarlet fever did you have in your practice within the last year?
- (2.) From what source was the scarlet fever introduced?
- (3.) Do you know of any cases in which *milk* was the vehicle of contagion?
- (4.) How many deaths have you had from scarlet fever?
- (5.) Was the epidemic characterized as *ordinary* or *malignant*?

Fifteen replies were received, reporting 208 cases of scarlet fever. The source from which the disease was introduced was not definitely stated in any case.

Nine deaths were reported.

The epidemic was characterized as ordinary; only a few cases of a malignant type occurred.

Yours, truly,
M. M. JOHNSON, M.D.,
Reporter.

EMBOLISM OF FEMORAL ARTERY.

DEATH OF FOOT.

I was called to Mrs. T. M., aged fifty, July 8, 1882. I found her with fever and a fast pulse, she having had a chill before my visit. I had attended her with chills and fever several times during the past two or three years. I prescribed thirty grains of quinine in six powders, one to be taken three times a day, and was to see her again in two days. I saw her July 10th, found her free from fever, but noticed that her pulse was fast and weak; prescribed an iron mixture, and was not to call again unless sent for.

Her husband called upon me early in the morning of July 11th, saying that in the afternoon of the 10th, while walking about, his wife was suddenly seized with severe pain in the leg, that the foot soon after became cold, and that they had been up all night trying to relieve the pain and to restore warmth to the foot and leg.

I found the foot and lower third of the leg cold and white, with much pain in the leg and no pulsation in or below the popliteal artery. Her pulse was extremely weak and irregular, and, upon examining the heart for the first time, I found it very much hypertrophied, very feeble and irregular in action, though no valvular lesions could be distinctly made out. I considered of course that the embolus had been formed within the heart.

July 12th, the foot began to look blue and sensation was almost absent. Soon after a line formed near the ankle and all below it was dead.

Dr. Storrs and several others saw the case with me. She was too feeble to stand the shock of an operation for removal of the foot without ether, and her heart was too much diseased to think of giving ether. In this dilemma we were obliged to wait; the dead foot, partly dried, was allowed to remain on till a deep line of separation had formed; what little odor there was was kept down by carbolic washes.

Finally, in the last days of August, I removed the foot close to the ankle, and left the rest to nature.

She is now, April 24, 1883, up and dressed with the stump still discharging on account of the protrusion of some dead bone. The pulse is very weak and the heart very irregular in its action.

IRVING W. LYON.

SUPPURATIVE PORTAL PHLEBITIS.

F. C. B., male, aged eleven years, a blond of good constitution and previous health, was taken with moderate pain in the abdomen in the afternoon of February 11, 1883. At 5 P. M. he ate a hearty dinner, after which the pain was more severe.

The patient had been subject to such attacks of belly-ache from early boyhood. The attacks would occur at irregular intervals three or four times a year, and could not be traced to any particular cause; would last a day or two sometimes, and pass off without any special treatment.

I was called to him in the forenoon of the 12th because of a chill which had occurred about 10 o'clock. The pulse was 120. I thought the chill was probably malarial, and prescribed quinine.

I was out of town on the 13th and the patient was seen by Dr. Fuller, who found the pulse 120 and so much pain in the abdomen that he suspended the quinine and ordered opiates with a poultice to the abdomen. In the evening the patient had a spell of severe pain followed by vomiting, after which the pain was much relieved. On the 14th, at 6 P. M., I found the abdomen somewhat tender on pressure, the pulse 98, and temperature $99\frac{1}{4}^{\circ}$.

February 15th, at noon, the pulse was 114, temperature $99\frac{3}{4}^{\circ}$. He had a chill at 9 P. M. last evening, and again at 9 o'clock this morning. Poultice to abdomen continued, and two grains of quinine every four hours.

February 16th, noon, the pulse was ninety-six. The abdominal pain, which had been gradually subsiding, had now nearly ceased. During its height I made a careful examination of the abdomen, but could not make out anything in particular save a tenderness and general discomfort upon pressure, especially in the right half of the abdomen. The liver was a little fuller than natural, and a little more sensitive than it should be, but the chills seemed an adequate explanation of both, and the chills in the absence of any abdominal lesion were gradually put down as malarial, and quinine became the chief remedy. It was noticed, however, that a chill temporarily increased the abdominal tenderness. During the next few days, from the 16th to the 23d of February, the chills became less frequent and severe, the abdominal pain was about gone, and it seemed as though convalescence was at hand; but by February 24th the chills, which always came irregularly and unexpectedly, began to be more severe and to be followed with more fever, which would, however, pass off in an hour or two with pretty free perspiration. He however had no vomiting, took plenty of liquid nourishment, slept well, and, with the exception of the chills and fever, did not seem very sick. The mind was always clear, and this was especially noted, as he was a child of rare mental gifts. From February 24th to the second of March the chills grew more frequent and severe, and the patient lost ground. The amount of nourishment taken was sufficient, but the increased amount of quinine given seemed to disagree with his stomach, and at length nausea and occasionally vomiting would occur.

March 3d, was seen by Dr. Fuller in consultation, about 10 A. M. Had had a severe chill at 9 A. M., with rapid pulse and high temperature,

(103½°) vomited during the chill. There was tenderness, on pressure, in the region of the stomach, but this was not marked. We carefully reconsidered the diagnosis but came back to the conclusion that we had an irregular malarial fever to deal with, with a tendency to become typho-malarial, or pernicious. As the quinine disturbed the stomach it was given by injection in milk. The injections were well retained and the stomach bore milk, eggs, and broths in sufficient quantities. He had no more chills during the next ten days, but the fever attended with exacerbations and remissions continued and grew gradually worse. The liver, however, became less tender and considerable pressure was repeatedly made over it without eliciting pain.

March 13th, towards noon, he was seized with a severe paroxysm of intense suffering, with chilly sensations down the back, was somewhat delirious during it, and voided his urine in bed involuntarily. From this time the symptoms grew worse, the pulse and fever ran higher, he gradually failed, and died March 19th at 4 p. m., the mind remaining clear up to the last.

The diagnosis in this case was a fever malarial in character. We did not always feel satisfied with it, often reconsidered it, but were unable otherwise to explain the symptoms. The sudden seizure with abdominal pain and tenderness, the unobscured mental condition throughout the entire sickness, the irregularity of the chills and fever, which corresponded to no known type, the failure of the quinine to cure, and finally the fatal issue where in case the disease was malarial the prognosis would have been good, were all facts which we had well in mind, and accordingly asked for and obtained permission to make an examination of the abdominal viscera.

This examination was made by Dr. Wainwright, twenty-four hours after death.

Upon opening the peritoneal cavity, the omentum was found healthy. The intestines were congested and pinkish in hue, but their peritoneal covering was healthy. A prolongation of the omentum on the right side ran down through the coils of the small intestine and was adherent at its lowest extremity to the brim of the pelvis near to the right ureter. The peritoneum about the right iliac fossa was deeply congested, but no inflammation was found about the fossa. In cutting above the transverse colon between it and the under surface of the liver, an abscess of about the size of a hen's egg was opened into, situated in the cellular tissue under the liver just to the right of the mesian line.

The liver had contracted no adhesions on its upper surface. When removed it weighed three pounds. It had preserved its natural shape, but was literally filled with abscesses. The abscesses were for the most part small, the size of a pea, but many were much larger. Every part of the organ, except a portion of the lobus quadratus, was studded

with these abscesses. The gall bladder was full of bile, but contained no calculi. Here the examination unfortunately ended. It was the first case of the kind which we had ever seen, and its nature was not fully understood until a day or two after, when it was too late to examine for the causes which had produced the phlebitis. We however feel that the case as it is is altogether too valuable to lose, and therefore offer it for publication in its present imperfect state.

IRVING W. LYON, April, 1883.

RHEUMATISM. ACUTE ULCERATIVE ENDOCARDITIS. EMBOLISM OF THE RIGHT SUBCLAVIAN ARTERY.

BY IRVING W. LYON, M.D.

Walter B., aged twenty-five, light hair and blue eyes, of medium stature and good build, consulted me at my office June 19, 1882, for pains in the shoulders, knees, and ankles. He had had three attacks of rheumatism; the first at nine years of age, the second a year later (this was very severe, lasting fourteen weeks); the third attack was when he was twenty, was confined to the house with it about ten days, though he was lame a long time before and after the attack. Besides these three attacks he suffered more or less every year since the first attack with rheumatic pains. When four years old was very sick with measles.

I found him pale, with a double murmur at the aortic valves and considerable hypertrophy of the heart. He was at work at house painting the day he consulted me; had complained for about two months of pains in shoulders, knees, ankles, and small of the back, and with headache. All these symptoms would come and go, but were never absent more than a day or two at a time; the headaches during these two months were at times quite severe; appetite poor; no vomiting. The arthritic pains were sometimes so severe that he would stay away from work a day or two at a time. Complained much of fatigue and was often chilly. His mother said that after supper he was in the habit of lying upon the lounge near to the stove, warmly covered, complaining of feeling chilly. Would always sleep well at night.

I prescribed an alkaline mixture containing colchicum.

June 21st. On account of symptoms which seemed to be malarial I ordered Quin. Sulph. ʒss. in six powders, one three times a day, and two Co. Cath. pills.

June 23d. On account of my absence from town the patient was seen for me by Dr. Fuller, who prescribed fifteen drops of the muriated tincture of iron three times a day.

June 24th. The arthritic pains having returned I prescribed,

℞. Acid Salicylic ʒij,
Sodae Bicarb. ʒij,
Glycerin, Aqua, aa. ʒij.

M. Dose tablespoonful every three hours, and the bowels to be moved again with the pil. cathart. co. improved.

June 26th. The rheumatism was so much relieved that I did not see him again till the 29th, and at the next visit, July 3d, he was so much better that I ceased my visits.

I was called to him again July 13th. The improvement last noted had not been permanent. He had been out of doors but once. At this visit the chief symptom complained of was headache. It was very severe. For it I prescribed about eleven grains of the bromide of potassium, three times a day. The urine contained no albumen. The headache continued, and it is noted, July 17th, that his head ached if he moved about in bed.

July 20th, 4 P. M. The pulse was noted, 94, and the temperature 102° . The patient was then ordered five grains of quinine three times a day.

July 21st, 5.30 P. M. Pulse 86, temperature $101\frac{1}{2}^{\circ}$.

July 22d, 10 A. M. Pulse 78, temperature 100° . But the rheumatic pains had returned so that the salicylate of soda was again given. This soon relieved the pains so that, July 26th, the dose was reduced to half a tablespoonful every four hours.

July 31st. There was a return of febrile symptoms without apparent cause, and the patient was seen with me by Dr. Storrs. At 5 P. M. we found his pulse 108, temperature $103\frac{1}{4}^{\circ}$. Besides a headache he was free from pain, except a trace in the heel upon pressure at a point where the pain had been severe a few days before. Dr. Storrs thought with me that it was a case of rheumatism complicated with malaria. We could not explain the fever by any lesion that we were able to detect. Pericarditis and endocarditis were both carefully looked for, but there were no symptoms or signs of either present.

August 2d, 6 P. M. Pulse 108, temperature $102\frac{3}{8}^{\circ}$.

August 4th, 10.30 A. M. Pulse 78.

August 5th. Rheumatic pains returned and the salicylate of soda was again given, with quinine.

August 6th, 5.30 P. M. Pulse 102, temperature $101\frac{1}{4}^{\circ}$.

August 7th. The afternoon temperature was 101° , pulse 96.

August 15th. Rheumatic pains gone and the salicylate discontinued.

August 18th, 10.30 A. M. Pulse 96, temperature $102\frac{1}{2}^{\circ}$.

August 20th, 4.45 P. M. Pulse 84, temperature $101\frac{3}{4}^{\circ}$.

August 22d, 11.30 A. M. Pulse 80, temperature $99\frac{1}{2}^{\circ}$.

August 23d, 8.30 P. M. Has a return of the rheumatic pains, which have been absent over a week. Pulse 82. Pain in precordial region is noted, but examination failed to find anything new about the heart. A tablespoonful of the salicylate of soda every three hours.

August 25th, A. M. Pulse 78. Severe pain in abdomen, especially

the right half, the muscles of which are very rigid and tender upon pressure.

August 30th. Minute petechiae are seen for the first time over chest and abdomen, some on the face and eyelids.

August 31st, 5 P. M. Pulse 114, temperature $98\frac{1}{2}$. Bowels moved to-day by enema after being unopened for ten days, due to opiates and the abdominal pain above noted.

September 1st. Pulse 120, temperature $99\frac{3}{4}$. Petechiae very dark.

September 4th. Was seen by Dr. M. M. Johnson. We examined the heart carefully, only to find the aortic murmurs and the hypertrophy. Dr. Johnson thought the case one of rheumatism complicated with malaria, as Storrs had thought. The patient was taking twenty-five grains of quinine daily, twelve grains of the citrate of iron and quinine, and about fifteen grains of the salicylate of soda, which I had resolved to continue with the other remedies in order to keep off another rheumatic attack. He was also taking between three and four pints of milk daily, and from three to four ounces of rum, which he preferred to whisky. He slept well, was perfectly clear in mind, would easily enter into conversation, would laugh and joke; indeed, this mental condition was the same throughout the entire sickness.

September 7th. Has had seven stools since yesterday. Pulse 112, temperature 100° . Tr. catechu was given for the diarrhea.

September 10th. Pulse 110, temperature $100\frac{1}{2}^{\circ}$.

September 12th, noon. Pulse 110, temperature 100° . About 4 P. M. pain, followed by coldness, suddenly appeared in the right hand and arm. I sent word by the messenger who informed me to have the hand and arm wrapped in cotton batting and bottles of warm water placed along the arm. Later I found the hand and arm warm from them, but could feel no pulsation in the brachial, radial, or ulnar arteries, and the hand uncovered began to grow cold in a few minutes. The heart sounds were not so distinct as before, the aortic murmurs were obscured, and the action of the heart was wobbling.

September 14th. Pulse 120, temperature 101° . Heart sounds weaker, little finger painful, and the tips of the middle, ring, and little fingers purple, and unless kept warm with wraps and warm bottles, are cold. The petechiae, which had entirely disappeared, reappeared to day about the right pectoral and subclavian region, and not elsewhere.

September 15th. Arm so painful up to shoulder that he could not bear to have it moved.

September 17th. Pulse weaker and 120.

September 19th. Pulse 130. Patient perfectly clear and rational.

September 20th. Died at 5.30 A. M. For the last twelve hours he was very restless and short of breath; mind clear up to last moments.

Autopsy, September 21st, 3 P. M.

Body not emaciated. Face turgid and the lower portions livid. The

little and ring fingers of the right hand were dark to above their distal joints, the middle finger to root of its nail, while the fore finger showed only a point of discoloration at its tip. Lungs healthy. Pericardium healthy, the sac containing one and a half ounces of serum. The right auricle contained a white clot the size of a pullet's egg, moderately firm and laminated, but readily mashed and torn under the fingers; a similar but smaller clot was found in right ventricle, with attachments to the muscles and tendons. The endocardium of the right cavities was healthy. On the left side the aortic valves were found thickened and retracted, and their edges covered with vegetations. The mitral valves were healthy. In one of the sinuses of valsalva, near the opening of the coronary artery, were five minute ulcerations of considerable depth, looking like perforations, the smaller large enough to admit the point of a pocket probe, the largest one about two lines in diameter. The walls of this sinus were whiter than those of the other sinuses.

The endocardium upon the aortic segment of the mitral valve, near the aortic opening, was the seat of three ulcerations; two of them were circular and about three lines in diameter, the third was smaller and triangular in shape.

The heart weighed sixteen ounces.

Liver fatty; weighed $4\frac{1}{2}$ pounds.

Right kidney weighed $7\frac{3}{4}$ ounces, and contained two infarctions of considerable size of light color. Left kidney weighed $8\frac{1}{4}$ ounces. The spleen weighed 12 ounces, and was the seat of several (at least six) infarctions. The largest, the size of an English walnut, was softened to the consistency of brain matter. The next in size equaled a hickory nut, and three were each the size of filberts.

A firm plug was found in the right subclavian artery, just beyond the thyroid axis. The plug was firmly attached to the walls and appeared to the eye to be similar in character to the vegetations upon the aortic valves. An inch and a half beyond this was a second plug, longer than the first, with its larger or clubbed end looking toward the heart. This plug filled the caliber of the artery pretty well. In the space between these clots the inner coat of the artery was in a softened condition; in this space was also some softened material. Around the artery, between these emboli, suppuration had occurred so that at least a drachm of pus was seen in the dissection.

The heart, with an abstract of the case, was sent to Dr. William H. Welch of New York. He said that the heart presented in a typical manner the lesions of an acute ulcerative endocarditis. The clinical history, as he gathered it from my notes, could not be so readily reconciled with the exclusively malignant, pyaemic, or septic nature of this disease held by many pathologists; yet as of especial importance in estimating the case he would mention the petechiae, the fever independent of arthritis, and the suppurative inflammation excited by the subclavian embolus.

A CASE OF CHRONIC ULCERATIVE LARYNGITIS.

C. W. CHAMBERLAIN, M.D., HARTFORD.

The following case is somewhat peculiar in several respects. I have not seen any account of a case that very closely resembled it, especially in the final results.

In June, 1873, I was consulted by a young girl aged nineteen, a school-teacher, for huskiness of voice. On examining the throat a sub-acute pharyngeal catarrh was discovered; the tonsils were considerably enlarged also, and their surfaces appeared honeycombed. I learned that she had been troubled with frequent attacks of tonsillitis, which did not, however, lead to suppuration. The larynx was slightly oedematous, and there were ulcerations upon both vocal cords. The ulceration upon the right vocal cord was near its posterior extremity and much the larger of the two; that of the left was very small and nearer the middle. The action of the laryngeal muscles was apparently not impaired, as the cords were firmly approximated, but certain tones were husky, and one or two notes of the scale could not be sounded. She was most troubled to speak in the slightly elevated voice she used most often in addressing her scholars. As vacation was to commence in a very short time absolute rest was not insisted upon, but the nature of the trouble was fully explained and directions given to use the voice as little as possible. There was a taint of scrofula in the family. Her brother had lost the sight of one eye from the results of inflammation following the entrance of a small fragment of steel into the eye, and the other eye had taken on a similar type of inflammation in spite of enucleation of the injured eyeball. Both he and his sister had had swelling of the cervical glands and suppuration, or cold abscess as it is commonly called, and their complexions had that pearly whiteness so often seen. The other children had had similar symptoms, but in much less degree. The brother finally lost the sight of the other eye and died of some scrofulous disorder, a wasting affection involving the mesenteric glands.

During her vacation the ulceration on the left vocal cord was thoroughly healed, and that on the right was cicatrized, but the result was so recent that a much longer period of complete rest should have been taken to render the results permanent. The treatment consisted of topical applications with the brush of astringents and tonics, alternated with a solution of iodine in glycerine, and a spray of a solution of persulphate of iron. For constitutional treatment iodide of potash and tonics; later, iodide of iron. The necessity of rest was enforced by a plain statement of the risks involved in using a scarcely healed organ, so delicate in structure and so easily impaired, especially under such unfavorable con-

ditions, but fear of losing her place and having to commence with the lower grade again was more influential than the threatened danger, and teaching was resumed, although the voice was still husky to some extent, but slightly, however, except after prolonged use. She soon found that the last half of the afternoon was hard to get through, but from pride or other motives deferred consulting her physician. But as she began to grow worse rapidly she was compelled to seek advice.

On examination the ulceration upon the right vocal cord was found to be nearly as large as when first seen, and apparently involving deeper tissues. When first seen it was quite superficial, but now quite deep at the center, the edges considerably tumefied. The epiglottis was also somewhat swollen. The same treatment was resumed, but was entirely ineffectual, and a tendency to increase was a new feature. To arrest this the ulceration was cauterized by a strong solution of nitrate of silver applied by aid of the laryngeal mirror directly to the ulceration by the concealed brush, which rendered it possible to limit its application. This was repeated several times with great benefit, and the size of the ulceration was diminished perceptibly. She persisted, however, in the use of the voice, so that it was impossible to completely heal the ulceration until the recurrence of the next long vacation. There was then left quite a thickening of the right vocal cord at the site of the ulcer, the membrane somewhat uneven at the edge of the vocal cord, and as a natural consequence impairment of the voice, which was very marked in certain tones. This condition of affairs continued for several years, the voice improving somewhat as time passed and the cicatricial tissue probably became partly absorbed as the border of the vocal cord became smooth again. She then had trouble with the glands on both sides of the neck, which swelled to a considerable extent and remained swollen for a little over a year, when they became very much smaller, and enlargement of the thyroid gland which never resumed its natural size, so that she always wore a silk neck handkerchief around the neck.

This takes the history of the case to the autumn of 1877. She then had a severe attack of tonsillitis and I was told some laryngitis. I did not see her at the time. When she recovered there was a greater amount of huskiness of the voice than she had ever had before, but it was thought to be due to the acute inflammation and would pass away in time. In the early summer of 1878, she was married, and shortly after, in August, as her voice did not improve, she consulted me again.

I found on examination the epiglottis and the whole upper part of the larynx much tumefied, swollen, and congested, with several superficial ulcerations. One was situated at the posterior extremity of the left false vocal cord, another on the right arytenoid cartilage. There was also one at the posterior extremity of the right vocal cord, the deepest of all which apparently involved the sub-mucous tissues. The epiglottis and false

vocal cords were so swollen that the vocal cords could be seen only after prolonged effort, and after the viscid mucons secretion that bathed the larynx had been partially removed by the brush, and then with difficulty. The case was treated locally and constitutionally, that is treatment was commenced, but she sailed for England for a visit a few weeks after, with the hope of improving her general health, so that nothing was accomplished except a little relief. The tumefaction was so reduced that she could eat comfortably. When she came she was unable to take anything but liquid food, and that with pain, and could scarcely speak above a whisper.

During her stay in England she was under the care of Dr. M. Mackenzie, who told her she had ulcerative laryngitis. Under his care the progress of the disease was delayed, and on her return none of the ulcerations were to be seen, except the one at the posterior extremity of the right vocal cord which had been merely held in check, the tumefaction was also very considerably lessened.

In 1880 from exposure she took a severe cold, and an acute attack of pneumonia succeeded, the convalescence from which was very slow. Asthma and emphysema followed this, so that she had to sleep in a semi-prone position. The larynx became so sensitive that she could endure only anodyne applications. The voice was little more than a whisper, and there was considerable difficulty in speaking at all. The thyroid gland commenced to enlarge again, and also the glands of the neck. Swallowing became very difficult, and a state of chronic invalidism was fully established. She was unable to leave her room, and was obliged to sleep propped up in a chair, as she was unable to breathe in a reclining position. Treatment locally gave so little relief that it was abandoned. Indeed the larynx was so sensitive that no applications could be borne. The attacks of dyspnea were frequent and severe. The voice was entirely lost. As a matter of course nothing but liquid food could be taken. Death seemed to be caused by a sudden filling up of the lungs, and took place suddenly.

The post-mortem showed considerable fluid in the pleural cavities and oedema of the lungs. Both lungs were emphysematous in patches, the upper lobes very extensively with several large spaces. No evidence of tuberculosis. The larynx was partly ossified, and rigid. There was no distinction between its cartilages. All membrane between had become cartilaginous, so that the whole larynx was in one piece, the walls thicker in some places than in others. Two of the upper rings of the trachea were also partly ossified. The ossification in the larynx was wholly confined to the regions of the thyroid and cricoid cartilages anteriorly and laterally.

There was no trace of the true or false vocal cords, but the interior of the larynx was lined with a pale thin membrane minutely studded

with sharply defined perforations, here and there, reaching to the cartilage or bone beneath, which appeared as if they had been cut out with a punch, except for a space about as large as a three cent piece on each side, where the glistening cartilage was uncovered. The borders of these exposed patches of cartilage were thickened and elevated and, as well as the whole interior, bathed in a profuse mucopurulent secretion, mainly mucus. The interior surface was uniformly smooth except as above described, and level, that is, there were no depressions nor elevations. The epiglottis was shriveled to less than half its normal size. The voice had been entirely lost for several months; still she could produce some whispering sounds, but with what was a mystery, nothing of course like speech.

There was more tissue upon the upper border of the larynx than elsewhere, but the internal structure of the larynx was destroyed some time before death. The larynx was somewhat contracted. The swelling of the thyroid and glands of the neck greatly impeded respiration. Several physicians were present at the autopsy. The case had not been under my care for several years, and only when under special treatment for the laryngeal trouble. I examined the throat about ten months before death but could see nothing below the upper border of the larynx which was excessively swollen. The scrofulous diathesis was probably at the base of this whole trouble. Had complete rest been observed at the outset until the ulceration had not only healed but the new tissue grown firm, probably there might have been no further laryngeal trouble, but as the taint was in the constitution it would have manifested itself in other directions. In fact she had considerable uterine trouble after marriage, for which she was treated by her family physician. There were one or two intercurrent complications which I omitted in the history of the case, as I did not attend her except as stated, but they simply serve as further illustrations of the scrofulous taint. Thus, she was under treatment for deafness for some time, partly in connection with the laryngeal trouble, and partly in connection with some inflammatory trouble with her eyes. She, after her return from England, became very deaf from obstruction of the eustachian tubes, diagnosed as thickening; from this she obtained little or no relief. The eye trouble never became very serious.

NEW HAVEN COUNTY.

DR. WAINWRIGHT,

Chairman of Committee on Matters of Professional Interest.

Your card of May 1st was received. I do not know as I have anything worth reporting, but within a few days I have had two cases in the same house in which sewer gases seem to have acted as predisposing causes.

Miss J., *ætat* sixty-four, was taken sick with erysipelas, May 7th, and died May 12th.

Mr. J., her brother, *ætat.* seventy, was taken with remittent fever, May 14th, and died the 19th; the disease speedily assuming a typhoid form.

On examining the premises I found that a tile drain leading to a closed cess pool opened into the cellar; the water from washing the soiled clothing and bedding of the family was poured into this drain which was without a trap.

The water from sink in the kitchen passed off elsewhere.

The furnace used for heating the house drew the air from the cellar, so that in the cold weather, when the cellar windows, etc., were closed, there must have been a draft from the sewer and cess-pool into the interior of the house. It appeared to me that this state of things must have had much to do with the severity of the two diseases, in which opinion Dr. Jewett of New Haven, who saw one of the cases, agreed.

Very respectfully,

M. N. CHAMBERLIN, *Reporter.*

NEW LONDON COUNTY.

W. A. M. WAINWRIGHT, M.D.,

Chairman of Committee on Matters of Professional Interest.

To the end that I might be able to send you a respectable report from New London County, I wrote to the various members of the Society out of town, requesting them to report what there has been of interest in their respective towns during the past year; but as there has been complete silence on their part, I conclude that there has been no disease outside of Norwich worth recording.

However, in Norwich, the profession have kindly assisted me in reporting what there has been of interest here.

We have had, during the past year, no epidemic of severity, although during the summer, autumn, and extending into the winter of 1882, there was a rather large number of cases of typhoid fever. One physician alone (Dr. Cassidy) reports having treated in the neighborhood of seventy-five cases, commencing in July, and extending up to January 1, 1883. The majority of the cases were not severe, as he lost but six; of these, two died with pulmonary complication, two with cerebral, one with perforation of the intestine, and one with asthma. He also reports one case being followed by phlogiasia alba dolens. A large number extended over a period of five to seven weeks, and not unfrequently he had from three to five in a single family, which reflects somewhat on the sanitary surroundings. In rather a large number of cases the diarrhea gave place early to constipation, which continued throughout. He adds that in his practice, typhoid fever, in 1882, seems to have taken the place of a large number of cases of intermittent fever the year previous. From others comes the report that there appears to be a general increase of malaria in this vicinity, complicating more or less almost everything, although cases of intermittent fever, pure and simple, are not frequent.

During the winter and spring of the present year there has been quite an epidemic of measles, principally confined, however, to the western part of the city, but more or less covering the whole town; as a rule they were not severe, there being but one death, and that complicated with diphtheria. For the last three months there has been quite a tendency to puerperal fever amongst the patients, but usually it has been quite tractable.

A single case of small pox occurred during March. I mention this as showing the necessity and benefit of prophylaxis in dealing with the disease by those in authority. A young woman probably contracted the disease in the paper-mill. By the action of the Board of Health, the patient was removed by night to a suitable place, and the premises disinfected, and every article of wearing apparel and furniture used was burned, and the spread of the disease was thus effectually checked, as no other case has appeared. Lest this treatment should be considered as especially advantageous to the patient, I should add that she died on the sixth day.

Dr. L. S. Paddock writes of a case of malformation occurring in his practice during the past year. A child born at full time, of healthy parents, presents the following appearance: As if the head had been constructed by a band passing around just above the eyebrows, the forehead was nearly flat, while from the top of the head a hernial protrusion projected, covering the head like a cap.

I would also call your attention to Dr. Cassidy's case of rupture of a labium during labor, to Dr. Paddock's case of fibro-cystic tumor of the uterus, and to two reports kindly furnished by Dr. Almy, one of which is the sequela to one reported by him last year; the report in the case of malformation of the breast, also an interesting case of acute articular rheumatism, with quite unusual complications.

Yours very truly,

W. H. DUDLEY, M.D., *Reporter.*

A CASE OF FIBRO-CYSTIC TUMOR OF THE UTERUS.

L. S. PADDOCK, M.D., NORWICH.

As cases of fibro-cystic tumor of the uterus are not frequent, and the termination of this one somewhat unusual, I take the liberty of reporting it at some length.

A married woman, aged sixty, was treated for acute rheumatism, during January and February, 1882; a tumor was observed, supposed to be a fibroid, which the patient said had existed for a long time. During the summer of the same year it enlarged rapidly, and by August 1st, it greatly distended the abdomen, and became very painful.

A consultation having been held, it was diagnosed as a fibrous tumor of the uterus, and ovarian dropsy.

August 11th, I drew off with the aspirator, about thirteen ounces of a thick, greenish fluid resembling pus; but a careful examination revealed neither pus cells, cholesterine cells, cells of Drysdale, or inflammation cells of Gluge, but an abundance of disintegrated fiber and fat globules.

August 18th, a profuse and uncontrollable diarrhea set in. I was shown about a pint of fluid like that drawn off by the aspirator, a week before. This continued in greater or less quantity till death.

September 17th, the swelling and fluctuation entirely disappeared from the abdomen, and did not return.

She died October 5th.

The post-mortem examination showed that the fluid had not been in the abdomen, that the ovary was not the seat of the disease, that an opening existed in the posterior wall of the uterus, communicating with an opening in the rectum, whereby the fluid escaped, that the uterus was large (in size just equaling that just after parturition) and flabby, containing an innumerable number of solid and semi-solid bodies, probably resulting from fatty degeneration, and that the dirty fluid now contained in the uterus was horribly offensive.

RUPTURE OF A LABIUM DURING LABOR.

P. CASSIDY, M.D., NORWICH.

November 14th, 1882, I was called to see Mrs. P., a French lady, aged 33, of good physique, in her fifth labor. Her previous labors had all been perfectly natural. Labor was somewhat advanced when I arrived; an examination showed the head well down in the pelvis, and everything appeared to be progressing favorably, when suddenly, and without any warning whatever, there came a sudden gush of blood which completely covered the bed and its surroundings. A hasty examination showed that it came from the right labium, which was still pouring forth blood in torrents. This I seized with my fingers, and managed to control the flow, while the husband went for assistance. The woman lay before me in a state of collapse, the complete picture of exsanguination, while everything in the form of labor-pain had ceased. It was fully an hour before assistance arrived, and in the meantime I was shut up to a single resource, viz.: holding on to the labium to prevent her from bleeding to death, which required the combined use of both hands, and which was tiresome in the extreme. On the arrival of my friend, Dr. Sprague, forceps were applied and the child delivered, which was dead. It proved to be very large, weighing about fourteen pounds.

A further examination showed that there were three rents in the labium, one of which was at about the meo-eutaneous junction, and running parallel with it, and the other two were internal to this. They

were each at least two inches in length, and extended down to the descending ramus of the pelvis, without doubt emptying the bulbs of the vagina. These were stuffed with lint saturated with a solution of alum, which controlled the hemorrhage.

The woman remained exceedingly feeble for a couple of weeks, but after a somewhat tedious convalescence regained her former health.

REPORT ON PREVAILING DISEASES.

GEO. H. JENNINGS, M D., JEWETT CITY.

We have been entirely free from malaria for the past year.

There have been very few cases of typhoid fever, much less than during preceding years. Pneumonia has been more prevalent, the preceding half dozen years being almost free from this trouble. There have been a number of cases of diphtheria, though not many.

During the seven and a half years preceding this spring, there have been but three or four cases of scarlet fever in this neighborhood. Last October I saw two patients in one family. The disease spread no farther. Sometime in January it appeared in two families in different parts of the village at about the same time. They were not under my care. The first case that came under my care was on the 10th of February, since which time it has been epidemic. I have seen above fifty cases since that date. Most of them have been mild cases. Complications have not been frequent. The principal complication has been acute desquamative nephritis—pneumonia occurred in one case—the trouble extending from the fauces to the ear in quite a number of cases, which left no ill effects. The deaths from this epidemic have been few. In the first two families mentioned, five died. Since then there has been two deaths. One early in the attack, on the third day. The other several weeks following, from pneumonia and acute nephritis.

“Colds” have been very prevalent during the later winter months and early spring, few families escaping; a complaint which has been very general throughout neighboring towns. Some of the cases have been quite as severe as an ordinary case of pneumonia, confining the patient to the bed for two or three weeks.

Excuse sending this in at so late a date. Your card was mislaid, and I labored under the supposition that it was intended to refer to the year to come, not the one past, until I accidentally came across the postal.

FRANK A. COATES, M.D., MYSTIC BRIDGE.

This is a region of the State that is probably as free from *malaria* as any other, if not more so. Dr. E. C. Segnin was in this vicinity last summer to visit one of his neurasthenic patients from New York, and advised him to stay until the cold weather drove him home, for he said that he had made thorough investigation of the subject, and believed that the region between the Thames River and Rhode Island line was exempt from malaria to a greater degree than any other that he knew on the whole northern Atlantic coast. But we do occasionally have a case of malaria that originates here, though the great majority of cases that we have to treat can be traced to a visit to some more infected district. A few miles back from the shore, in the country, I have found a few localities where the disease in some seasons has been quite prevalent.

Typhoid fever has been a rare disease here for several years, and most of the so-called cases that we have had, if not all of them, I believe to have been cess-pool fever.

Scarlet fever has not prevailed to any great extent. There have been a few cases, but nothing like an epidemic. It has not been very severe, nor highly contagious, and wherever it has prevailed it has seemed to be endemic in character.

There have been a few sporadic cases of *Diphtheria*, but of a mild character, none that I know of proving fatal in this vicinity.

Pneumonia has not been frequent, and but very few cases can be reported for the year, and these generally not severe, but throat, bronchial, and capillary lung troubles—commonly called hard colds—have been very common for the last two months, resisting treatment of any kind in many cases so as to afflict the patients for weeks together.

I have had one, to me, interesting case of congenital hydrocele in a boy three years old. It had resisted external treatment by alcohol, iodine, etc., etc., when, to make a radical cure I drew three or four threads of fine machine silk through the length of the sac and left it there for nineteen hours only. When I withdrew it, a little pus was seen at the openings of the skin, and I feared trouble. The serotal inflammation that resulted was fearful, and I thought my patient would die, but he finally got well and the hydrocele is cured.

THE RESULT IN THE CASE OF MALFORMATION OF THE HEART—REPORTED IN 1882.

L. B. ALMY, M.D., NORWICH.

In the report of cases last year, I gave a short account of a case which had been supposed to be one of non-closure of the foramen ovale. In this case, at one time, the patient gave all the signs of impending death; was pulseless, jaw dropped, extremities, nose, face, and breath cold, axillary temperature 94.6° , with complete recovery. The after history of the case, with the autopsy, may be of interest to the Society.

In the afternoon of December 30, 1882, I was called to see Miss E. R. again for the first time since her trouble in February. I found her suffering from an attack of acute articular rheumatism, located in the ankles. The following morning I was sent for, and upon my arrival, found that she had been feeling fairly well in the early morning, that while the family were at breakfast down stairs, they heard a noise in the room above, and on reaching the bed, she was breathing her last.

On the afternoon of January 1, 1883, I made a post-mortem in the presence of Drs. Cassidy, Paddock, and Robinson, and of Mr. Childs, student of medicine. The thoracic cavity only was examined. The right lung was fairly inflated, the left lung was compressed in the upper part of the chest, and held there by old pleuritic adhesions. The heart was the principal object of interest. The weight was 16 oz., and the ventricles were both immensely hypertrophied, the left ventricles being over an inch in thickness. The auricles were dilated to nearly twice their ordinary capacity. On examining for a patent foramen ovale, I found an opening admitting the little finger, which at first seemed to enter the other auricle, but on examination, I found that the auricular appendix was enlarged so that it was nearly an inch and a half long, and the opening led to that—the foramen ovale *was not pervious*. On examining the ventricles, I found the right one excessively dilated and its walls hypertrophied. The tricuspid valve was extremely diseased, calcareous deposits existing all around its free border. The mitral valve was healthy, also the semilunar valves. Between the two ventricles, at a level with the auriculo-ventricular septum, was an opening which would admit easily the index finger, so that the finger could be passed with ease from the right ventricle into the aorta, or from the left ventricle into the pulmonary artery, or *vice versa*. In other words, the blood from the right ventricle was as liable to go into the circulation, or that from the left ventricle to the lungs, as it was to go in its own proper channel. How the patient could have lived for over sixteen years, with this heart, and how recovered from at least one attack of endocarditis, which damaged the tricuspid valve past redemption, is one of the mysteries of medicine.

A CASE OF ACUTE ARTICULAR RHEUMATISM, WITH COMPLICATIONS.

L. B. ALMY, M.D., NORWICH.

The following case is interesting, mainly, from the rarity of one of the complications.

March 29, 1883, I was called to see a boy (I. L. T.) age, 13, who, his step-mother said, was complaining of pain in his knees. On my arrival, I found the boy just starting with acute rheumatism. Pulse 110, (?) temperature 101.5. Right knee swollen a little, and very painful. Gave him salicin, gr. viii, every two hours; morphia, p. r. n. He complained the following day of some diarrhea and nausea. Dover's powder and bismuth checked the frequent movements from the bowels. The same day, the 30th, the left knee was involved, and the temperature reached 102.

On the 2d of April, I was sent for before the time for my usual visit, and found that his abdomen was tympanitic, very much swollen, and he was complaining bitterly of pain there; the ankles had become involved, and the knees were better. The temperature, which the evening before had been 102.5, had mounted to 103.5, and the pulse was 135; respiration about 50. By night his temperature was 104.8, and pulse 140. From this time I kept a close record of the case, as follows:

April 3d, 10 A. M. Temperature 104.5, pulse 140, respiration 50; still complains of pain in abdomen, which is tense and excessively tender; ankles swollen and painful.

R̄ Salicin, gr. x; every two hours.

Morphia, gr. $\frac{1}{8}$, p. r. n.

3 P. M. Temperature 104.2, pulse, 145, respiration 45.

10 P. M. Temperature 105, pulse 150, respiration 50. To be sponged with alcohol and tepid water until temperature should fall. This was faithfully done. Salicin increased to gr. xii.

April 4, 10 A. M. Temperature 102.5, pulse 130. Does not complain so much of his bowels, and is sweating. To take with the rest, tr. digitalis, gr. v., every six hours.

3 P. M. Temperature 103, pulse 126, respiration 32. To be sponged again.

10 P. M. Temperature 101.5, pulse 120, respiration 32.

April 5th, 10 A. M. Temperature 100.5, pulse 110, respiration 30. Abdomen is better, ankles better, wrists swollen and painful.

5 P. M. Temperature 101, pulse 120. Feeling pretty comfortable except his wrists.

April 6th, 11 A. M. Temperature 101, pulse 120. Complains of headache and pain in the back of his neck. Is unable to turn his head,

which lies upon the right side. To have potass. bromide, gr. x, every three or four hours.

5 P. M. Temperature 101.4, pulse 120. Much the same. Had a natural movement from bowels. Does not like the bromide, and for that reason says his head is better, though he complains of severe headache, when he forgets himself.

April 7th, 11 A. M. Temperature 101, pulse 120. Headache still painful; cannot move his head at all. It is hot and the carotids throb violently.

5 P. M. Temperature 102.2, pulse 125. Says he is "pretty well." His mother says, however, that he cries out with the pain in his head and the back of his neck. He will not move his head. Was able to get a view of his right ear which was red and swollen, having been bent on itself. Complains that the noises in the street hurt his head.

April 8th, 11.30 A. M. Temperature 102.5, pulse 125. The pain and swelling have left the wrist, and his shoulders are becoming painful. Pupils regular, and react to light. Abdomen is now retracted. On examining the ear, I found a spot which was becoming gangrenous. Put his head on a small round air pillow, and another one under his back. He has some trouble in passing urine.

6 P. M. Temperature 102.5, pulse 132, respiration 40. Complains of pain in his heels. Has been delirious at times for two days. Says he is "pretty well," except for the pain. To be given whisky during the night.

April 9th, 12 noon. Temperature 102.5, pulse 132, respiration 40. Complains of pain all over him, but principally in epigastric region, and toward the left side. Says it hurts him to breathe. Head remains about the same. To stop the salicin, and to have ergot and fl. ex. gelseminum, in small doses with his digitalis. Morphia continued p. r. n. Attempted to examine his chest, but he complained so bitterly that I was forced to desist. To continue the whisky as necessary. He was very much opposed to alcohol, being a member of a temperance organization, so it had to be smuggled in with his other medicine.

6 P. M. Temperature 103, pulse 140, respiration 50.

April 10th, 12 noon. Temperature 102.5, pulse 135, respiration 40. Had a restless night. Is unable to move, but wants something all the time.

6 P. M. Temperature 104, pulse 130, respiration 44. Complains of distress in chest and difficulty in breathing. To have ammonia carb., gr. iv., every two hours, alternately with whisky. Sponging.

April 11th, 11 A. M. Temperature 102.5, pulse 120, respiration 49.

6 P. M. Temperature 102.5, pulse 130, respiration 50. Has had a fairly good day. Complains of his head and stomach.

April 12th, 12 noon. Temperature 101.8, pulse 130, respiration 66.

Pulse is dicrotic and quite weak. To continue as before. The slough on the right ear is separating. To have tr. ferri. chlor., gr. v., every three hours.

6 P. M. Temperature 102.5, pulse 130, respiration 42.

April 13th, 12 noon. Temperature 102.6, pulse 130, respiration 60. Dullness on the right side of the sternum, in the fifth and sixth intercostal spaces, extending about an inch. Heart sounds almost lost. Proposed aspiration of the pericardium, which was refused, as the head symptoms were still severe, and there was no certainty of any good result in the end.

6 P. M. Temperature 102.8, pulse 130, respiration 60. To stop the ergot, etc., as it was next to impossible to give medicine, and to continue the digitalis, ammonia carb., and whisky.

April 14th, 11 A. M. Temperature 102, pulse 130, respiration 60. Had a sinking turn in the night, when his hands and feet were cold. Does not complain of anything in particular. Mind wanders a good deal. Sleeps most of the time.

6 P. M. Temperature 102.8, pulse 130, respiration 60.

April 15th, 11 A. M. Temperature 102, pulse 135, respiration 75. Patient weaker, otherwise about the same.

6 P. M. Temperature 102, pulse 140, respiration 60. Was asleep and I did not waken him.

April 16th, 11 A. M. Temperature 101.5, pulse 150, respiration 75. Had a bad night. Needed constant stimulation. Evidently sinking.

6 P. M. Temperature 101.3, pulse 150, respiration 55.

April 17th, 10 A. M. Temperature 101.2, pulse 140, respiration 60. Seems a little more comfortable.

6 P. M. Temperature 101.2, pulse 150, respiration 68. Is very much mixed on his anatomy. Calls his ankles his head, and his bowels his knees, and complains of pain in both. Has had free movement from his bowels to-day.

April 18th, 10 A. M. Temperature 100.4, pulse 155, respiration 62. Is much weaker.

6 P. M. Temperature 102.5, pulse 155, respiration 62.

April 19th, 10 A. M. Hippocratic face. Temperature 101.8, pulse 158. Cheyne Stokes respiration. Six respirations, with seven seconds pause, then six respirations again.

1 P. M. Failing. Pulse intermittent and very weak; 165.

6 P. M. Oedema of the lungs commencing. Jaw dropped.

6.35 P. M. Woke and wished to be raised up in bed. As he was raised a little the heart stopped.

WINDHAM COUNTY.

TO DR. W. A. M. WAINWRIGHT,

Chairman of the Committee on Matters of Professional Interest.

MY DEAR DOCTOR: The reporter on "Matters of Professional Interest for Windham County" would respectfully report that a postal card was mailed to every member of the society in the county, soliciting reports of interesting cases and any facts of interest to the profession that could be embodied in a report for the county. The report therefore, I regret to say, is not an extended one, as only two replies have been received from the members of the Society in the county.

The past season has been characterized by an unusual amount of sickness in this locality. Exanthematous affections have been unusually prevalent, of a light rather than of a severe type of disease. Pneumonitis and acute bronchial affections have also existed, with some cases of parotiditis. I have observed that the causes that have contributed largely to the frequent prevalence of pneumonitis during the past season have been due in the vast majority of cases to unsanitary surroundings and sudden climatic changes. I have seen some types arising from ill ventilation, originating from polluted air which, being almost habitually inhaled, produces causes that tend always after a time to so depress the system and lower the vital forces as to pave the way for contracting the disease. Malarial diseases are also somewhat more on the increase in this section than heretofore.

I would especially invite your attention to the interesting contribution from Dr. Kent of Putnam, on "Hysteria Caused by Uterine Diseases."

I am very truly yours,

CHARLES JAMES FOX, M.D.,

Reporter for Windham County.

THE USE OF THE HYDRATE OF CHLORAL IN SOME FORMS OF CONVULSIONS.

BY CHARLES JAMES FOX, M.D., WILLIMANTIC.

For several years past I have made use of the hydrate of chloral in a large number of cases of convulsive disorders with gratifying effects, so much so that now I believe the drug to be almost a *specific*, so to speak, in these affections. It is interesting to observe that in cases of convulsions, where the bromides so often act with special efficacy, that the best effects can only be obtained when the disease is limited to the centers in the spinal cord and basal ganglia. In such cases its effect is sedative to a marked degree. It is well understood and accepted that motor centres exist in the cerebral cortex itself, which is more intimately connected to the organs of will and intelligence. Hence it is over these higher motor centers, where convulsions are more or less present, the bromides seem to be valueless. Permit me to present a case fully illustrating the value of the drug after all other remedies had for a long time been tried in vain.

Miss A., aged eleven years, came under my care in the fall of 1882, giving a history of frequent convulsive attacks, which had been present ever since her eighth year, and during the past few weeks had increased from one in four or five weeks to one nearly every other day. She had been under treatment for a few weeks, but with very little benefit. Her mother was also occasionally subject to them, but not very much of late. Several convulsions were carefully observed, with the following history: There was no premonition of the attack, and the onset was so sudden it was almost impossible to understand what set of muscles were first affected. The head was tightly drawn down and both of the sterno mastoids rigid, the arms were tremulous and rigid in semi-extension, the facial muscles were unaffected, and the eyeballs motionless, although the pupils were somewhat dilated and the conjunctiva insensible. There was deep groaning during the convulsion, which lasted about two minutes. The respiration was labored through the contraction of the glottis, and during the attacks consciousness was entirely suspended. There was no organic lesion discoverable, and no source of internal irritation. Patient was kept absolutely quiet in bed, and a carefully regulated diet tested for a few days. There being no improvement I commenced, September 26th, by ordering five grain doses of the bromide of potassium three times a day, on the 29th ten grains three times a day, and on the 30th sixty grains at a single dose. From this no effect was

perceived, and the attacks remained the same both in character and duration. The tincture of belladonna was given in five minims doses every six hours, but this treatment had no effect and was increased, October 1st, to eight minims, with a similar result.

October 3d, at 3 P. M., patient was given five grains of the chloral, and during the next six hours no disturbance and patient enjoyed a good sleep.

October 4th. Another convulsion, and the patient was given five grains twice daily, morning and night.

October 5th and 6th. No convulsion under the same treatment.

October 7th. A convulsion occurred; ordered five grains every six hours, commencing at 9 A. M., and at night I doubled the doses to ten grains.

October 10th. No convulsions have occurred. I ordered chloral, five grains at 10 P. M. and 4 A. M., and none during the day.

October 14th. No convulsions. Stopped the chloral altogether.

November 29th. There has been no return of convulsions, and patient was in every way apparently healthy.

I also had other cases very similar in their attacks which yielded promptly to the chloral plan of treatment. In these cases I am of the opinion that the seat of mischief was in motor centers situated in the cerebral cortex in the convolutions bordering the sylvian fissure. These are supplied by a large branch of the middle cerebral artery, which passes through the center of the disturbed function. The effects of the plan of treatment seemed to be direct and well marked in character, and it seems to act by its sedative power on the irritated nerve centers, and therefore allows the opportunity for rest required to recover tone and nutrition.

HYSTERIA CAUSED BY UTERINE DISEASES.

J. B. KENT, M.D., PUTNAM.

In many cases of hysteria and so-called hysterio-epilepsy the exciting cause is distortion of the uterus.

I am convinced of the above fact by three well-marked cases of hysteria which have come under my care within the past twelve months, in each of which the exciting cause of the hysterical attack was due to retroflexion of the uterus, or, rather I might say, the exciting cause was due to reflex irritation, the result of retroflexion of the uterus. This irritation consisted chiefly in the physical compression and tension

of the uterine tissues, consequent upon the forcible bending of the body of the uterus on the cervix, this bending producing compression of the tissues at or near the angle of flexion, and by its interference with the tissue circulation, had the further effect of producing a continuous congestion of the body of the uterus. Dr. Emmet says that "Retroflexions are deviations from a previously existing Retroversion;" at least there is always great increase in size of the organ, which invariably accompanies retroversions, as the following cases illustrate.

In many cases of uterine displacements in women who have borne children, there will be found laceration of the cervix uteri, either unilateral or bilateral, some slight and others extending high up in the cervix. There will also be found the characteristic granular degeneration of the os, which so often accompanies laceration. I believe that to the above lesion, namely, laceration of the cervix, is to be attributed to a very large degree the many cases of uterine subinvolution, with its many attending evils, which are so frequently met with in our practice. To it is due, as a cause, the most aggravated of the three cases, which forms the subject of this article. The case is one of five years standing, patient dating her trouble back to the time of her confinement, five years ago. She had what she called a hard time, and did not get up well afterwards. Patient is twenty-eight years of age, of American parentage, and had always enjoyed good health previous to her confinement, but ever since has suffered (at short intervals) very severe attacks of pain, coming on sometimes at her menstrual periods, and at other times during the intervals, menstruation being always attended with more or less pain.

In the above case a speculum examination revealed the following: Laceration of the cervix uteri (bilateral); a red, granular, bleeding os uteri; subinvolution; retroflexion; marked tenderness of the uterus and adjacent structures, so much so that reduction by the finger gave considerable pain. Cervical leucorrhoea quite profuse at times. Patient complained of inability to walk and great fatigue on standing, some pain in back, and irritation of bladder.

Treatment of the above case was as follows: The uterus was replaced twice a week, and partially supported by a tampon of absorbent cotton saturated with glycerine. She was ordered the free use of the hot water vaginal douche, night and morning, in the recumbent position—eight quarts of water from a fountain syringe each time, to which was added a small handful of common salt. In two months from date of commencement of above treatment the size of the uterus was very greatly reduced, and the tenderness so much less that patient could wear a soft rubber, inflatable top, lever pessary, which she wore with perfect ease, and answered well its object. After a time Thomas's retroflexion

pessary was substituted, which kept the organ in place, thus preventing a return of the retroflexion.

Finally, when the proper time came, the cervical laceration was repaired by Emmet's operation. Patient did not have an unfavorable symptom, but went on to rapid recovery, and is entirely relieved of hysteria, and is now in the enjoyment of good health.

The other two cases were quite similar to the above, except that there was no laceration of cervix, and the hysteria was less marked. In all three cases there was marked retroflexion, and in all was there complete relief from the hysterical symptoms after the uterine dislocation was removed.

Treatment in the last two cases same as in the first, with the addition of an occasional application of tr. iodine comp. to the cervix.

SYMPTOMS AND DIAGNOSIS OF INEBRIETY AS A DISEASE, IN REFERENCE TO LIFE INSURANCE.

B. N. COMINGS, M.D., NEW BRITAIN, CONN.

In 1882, Rev. John E. Todd, of New Haven, read before the General Association of Congregational Churches of Connecticut a paper entitled "Drunkenness a Vice—not a Disease." Another Congregational pastor reviewed in a weekly newspaper, and subsequently in a pamphlet, Dr. Todd's paper. Quite recently, R. M. Griswold, M.D., of North Manchester, Conn., under the title of "What is an Inebriate, and why he is one," has replied to Dr. Todd's paper from a medical standpoint. All these papers are carefully prepared and ably written.

The perusal of these papers has impressed me with the conviction that the symptoms and diagnosis of inebriety as a disease are imperfectly understood and not made definite in any medical literature which I have been able to consult. Without attempting to review or reply to either of the above papers, my present purpose is to present, as clearly and concisely as I may be able in a brief essay, the symptoms and diagnosis of inebriety as a disease. The question of whether inebriety is a disease is so fully discussed in the above papers and in other medical literature, I let that question pass, and assume, as fully shown in Dr. Griswold's paper, the weight of medical testimony is strongly on the side of the disease theory. Further discussion and authority is uncalled for, and the assumption is fully justifiable.

In what I have to present I have no authority to quote, and only promise the results of my own observation. If I succeed in calling the attention of men of longer and wider experience to this phase of the subject, my purpose will have been accomplished.

To determine whether a patient is suffering from Inebriety as a vice, or a disease, is sometimes a matter of great importance. In life insurance, inebriety as a vice may not shorten life, because reformation is possible, and the vice may have such limitations as not seriously to impair health. A policy may be granted to an applicant who says he drinks occasionally or temperately. But a policy should not be given to a man who indulges in such a way as to indicate that he is the subject of inebriety as a disease, or that he has an hereditary tendency to inebriety. It may be a delicate question to ask an applicant if his ancestors were inebriates. But in a proper adjustment of insurance it is just as important as to ask if he has tuberculosis or scrofula. There is no more propriety in granting a clean policy to an inebriate (by disease or heredity) than to an applicant who has tubercles in his lungs, or who has a tubercular inheritance from either parent.

In placing men in positions of trust, the diagnosis of the disease may be of great consequence. You may take a man into partnership who occasionally indulges in the social glass or takes his wine with his dinner, but you might as well take a serpent to your bosom as to marry your daughter to a periodic inebriate, or take him into copartnership. Inebriety, by acquirement or heredity, totally disqualifies a man for any position of trust or confidence. If the intemperance be a habit or a vice, there may be some hope that a partner in business, or a wife, may bring about a reform; but it is a forlorn hope when the inebriety has become a disease.

Ever since Noah planted a vineyard, and drank of the fruit of it, the race has indulged in some form of alcoholic stimulant, but not always to excess, as he did. There is obviously a normal and an abnormal use of alcoholic drinks. Prior to about 1830, a decanter was always to be found on the sideboard of every well-to-do family. Its presence was an essential condition of house-keeping, as an expression of hospitality. An invitation to take something to drink was as much a matter of courtesy as the handshaking. With the prevailing free and easy use, there were many families in which, for generation after generation, there was not a single inebriate, and cases of intoxication were very rare, even at social gatherings; but then, as now, there were certain families in which moderation seemed to be an impossibility. Indulgence invariably led to inebriety, which was regarded as more disgraceful than at the present day.

In the wine-producing countries of Europe the common people have their bottle of wine at dinner as regularly as their coffee at breakfast, and apparently the wine is as harmless to the majority of the people as the coffee. Still, certain families become inebriates, the same as in this country, though I believe the percentage there is much less than here. Society is apparently divided into two classes of persons—those who are in a normal condition, in relation to the use of alcohol, and those who are in an abnormal state. The first can use it habitually, or even occasionally to excess, without acquiring the disease. The second class must practise total abstinence to be safe. Moderation, or even temperate indulgence, leads at once to the primary symptoms of the disease.

In the normal condition, men use alcohol as they use tea or coffee. If a bottle of wine, for instance, is taken at dinner, that satisfies them for the day, unless hospitality requires them to take a glass with a friend in the evening. This practice may be continued by some persons for years without any inclination to further indulgence. If, for any reason, the wine is withheld, it creates no more uneasiness or disturbance than the omission of the usual cup of coffee at breakfast. In the abnormal or diseased condition, abstinence at the usual period of indulgence produces loss of appetite, insomnia, unrest, and nervous irritability, with incapacity to perform with ease the usual duties of life. Where indulgence is only a vice, or a habit, it can be abandoned with comparative ease; but when it is the result of disease, it can be given up only with the greatest difficulty, or by the pressure of some external influence. On the slightest indulgence, the old longing returns again, with all its original force, even after the lapse of years.

So far as temperate drinking is concerned, "once an inebriate, always an inebriate." Moderation is a physical impossibility. Smoking is a vice, and is one of the most difficult to relinquish, and requires a severe struggle for a limited period, but when the desire to indulge in the habit is once overcome, it does not return again. In my observation, a very large percentage of those who quit smoking never take it up again.

When inebriety is only a vice, it is governed largely by environments. Many men drink from social influences; drink because their friends do. If they do not meet their boon companions at their customary resorts, indulgence is frequently omitted. Then, again, on occasions of unusual social interest, the dissipation is

carried to great excess. The habitual drinker may be influenced by a great variety of reasons. It may be the custom at his table; he may think his health requires it; or he may have been so educated as to fall into the habit as a matter of course. When the social or habitual drinkers are surrounded by such environments that the usual conditions that have led to their indulgence are absent, they easily become abstainers, and may, from time to time, return to their old habit, or forsake it, according to circumstances.

When inebriety is a disease, its victim indulges independent of circumstances. It is no uncommon thing for the periodic drinker to seek seclusion, having previously provided himself with a sufficient quantity of his favorite liquor, and to become intoxicated at once, and keep up this condition for several days in succession, till his stomach will no longer tolerate the abuse. The debauch over, he may remain a total abstainer for weeks and months.

Hon. Mr. —, a very prominent lawyer of Philadelphia, and an ex-mayor of the city, aged about fifty, informed me that he was obliged, two or three times a year, to have a debauch. He has an old family residence, sixteen miles out of the city, to which he resorts with a jug of whiskey, which he drinks to the exclusion of other drink and food, for several days in succession, till his stomach rejects the whiskey; then he abandons it, and after a few hours can retain a cup of strong coffee, taken clear. He is soon able to take other nourishment; when he can return to his office and resume business. For a week or two following, he can do his best work; his mind is clear, vigorous, and active, and when he has some unusual intellectual labor to perform, he prepares for it by a week of dissipation.

I might cite several other men, of good standing in business circles, who, practically, do the same thing.

I am not aware that inebriety as a habit, or a vice, is accompanied by any peculiar nervous sensations, such as characterize the diseased condition.

I have repeatedly asked periodical drinkers to explain to me in what the periodic desire consisted. Without an exception they have described a peculiar sensation of uneasiness, unrest, or goneness in the region of the solar plexus of nerves: One said it was a pain, another that it was a gnawing sensation. Accompanying this sensation there is restlessness, inability to sleep quietly, or complete insomnia, inability to fix the attention, loss of appetite,

and more or less gastric derangement. With these sensations the thought is ever present that an alcoholic stimulant will afford immediate relief.

In the progress of inebriety, there is a certain undefined period reached when a permanent mania for intoxicants is established so thoroughly that it seems almost to be a law of the organization. Total abstinence does not eradicate or even abate its power. So long as this mania is not indulged it may lie apparently dormant; but the smallest appreciable quantity of alcohol is sufficient to arouse this peculiar mania to all its original strength and force.

The victim of this disease—I know of no other name by which this abnormal condition can be designated—may practice total abstinence for years, and may become, in fact, unconscious of an appetite for alcoholic stimulants, and yet the smallest appreciable quantity of an alcoholic stimulant, taken as a beverage or a medicine, may take the unfortunate victim back to the physical condition of his former inebriety. There are abundant illustrations of this peculiarity.

This peculiar idiosyncrasy of the inebriate furnishes unmistakable proof of the nature of his case, and at once settles the question of disease.

In the early stage of inebriety the diagnosis of the disease is extremely difficult. There are no physical signs upon which the examiner can rely. He must draw all the facts on which to form his opinion from the applicant himself or his friends, neither of whom are likely to conscientiously confess the truth. The applicant himself, as a general rule, is ignorant of the fact of disease, and will account for his personal habits in some other way. Fortunately, if he is not thoroughly posted in regard to the symptoms of the disease, he will unwittingly betray the truth by the revelation he will make of his habits.

First of all it must be borne in mind that the inebriate is a chronic deceiver, and cannot be depended upon to tell the truth. His testimony is not to be relied on even under oath when there is a motive to deceive. unless there are corroborating circumstances to sustain it. Impairment of the moral perceptions is one of the first symptoms of the disease, and is also an obstacle to a correct diagnosis.

An inebriate never sees himself as others see him. If he did, there would be more hope in his case.

The heredity of the applicant should be carefully inquired into. No man is a good risk if he uses alcohol in any form, or to any extent, if he has an inheritance of inebriety, insanity, epilepsy, or any other form of neurasthenia. No matter what a man's present habits of indulgence may be, he will not be able to adhere to a temperate use for any great length of time. It is a recognized fact that *three-fifths* of all the persons who use alcoholic liquors between twenty and thirty become inebriates; and the inference that persons of such a heredity who indulge in alcoholic stimulants will become inebriates, amounts to almost a certainty. Careful inquiry will elicit the fact that such persons use alcoholic drinks because they like them; because the effect, if not the taste, is agreeable. A man may like claret because it relieves his thirst; or he may like beer because it gives him an appetite; or he may indulge in the company of friends for the sake of sociability or hospitality, and it may not be a symptom of inebriety. But when it is evident that the man drinks because the specific effects of alcohol are especially agreeable to him, he must become a total abstainer, or it will be only a question of time when he will become a confirmed inebriate.

A positive dislike or aversion to the use of alcoholic drinks at certain intervals and a strong desire for them at other periods is often a characteristic of the inebriate diathesis. When an admission is made of an occasional indulgence to excess, it is very important to know why it is occasional, or what the occasion is. If it be periodic, or at somewhat regular intervals, it must be regarded as evidence of disease. If the occasions of indulgence are accidental, or the result of environments of a temporary character, such as social gatherings, it may be regarded as a vice and not as a disease.

An abnormal desire for alcoholic drinks, however manifested, is an evidence of disease. If the diseased condition has once been established, it is always liable to return; and the percentage of exceptions in favor of permanent cure is so very small that a period of abstinence for one or more years does not make the applicant a safe risk. Men who have had alcoholism, dipsomania, or delirium tremens, and have reformed to such an extent as to be total abstainers for any considerable period, go down very rapidly if they return to their old habits.

Under such circumstances their prospect of life is very low; not more than four or five years at most in the majority of cases.

THE MICRO-SPECTROSCOPE.

PROF. M. C. WHITE, M.D., NEW HAVEN.

The true man of science is perpetually striving for a better and closer knowledge of the world around him. Each of us, by his own work and thought, may enlarge the circle of his own knowledge at least, and thus make the universe more beautiful to himself, if not to others.

Our own profession deals less than some others with exact science, yet even the physician will find a wide door open for improvement in his own special work if he looks carefully to the progress of the exact sciences and watches their applicability to his own appropriate investigations.

The wave theory of light, most wonderfully developed in modern times, has shown us a scientific basis for the harmony of colors not less wonderful and enchanting than the harmony of music. By researches in music and electricity a method has been discovered to transmit eight or more messages simultaneously over one wire.

Equally mysterious and wonderful have become the practical applications of the prismatic spectrum. From the visible red to the violet, in the rainbow of promise, are seen an octave of vibrations. The blending of appropriate light vibrations gives results pleasing to the eye and of inestimable value as a means of analyzing the molecular compounds otherwise resolved with difficulty in the laboratory of the chemist.

In this line of research has arisen almost a new science, known as Spectrum Analysis. Chemical elements and chemical compounds are found to emit, when heated, rays of light with vibrations as definite as any note or semitone in the diatonic scale, and such elements or such compounds in definite conditions take out from the prismatic spectrum certain portions of color, certain definite lines of vibrations, which mark the spectrum with well

defined dark lines absolutely characteristic of the substances under examination.

It was this line of research which enabled Bence Jones to determine that carbonate of lithia taken into the stomach could be diffused into every part of the organism in five minutes, and also to determine with great exactness the time required for the absorption of quinine. Much of this work has been performed on traces of matter so minute as to elude the ordinary tests of the chemist. It was with the hope of bringing this minute analysis to bear upon the objects seen in the microscope that Sorby and others have constructed and variously improved and modified the instrument known as the micro-spectroscope.

The first step of progress in this direction was the construction of the direct-vision prism, a combination of three prisms of crown glass with two prisms of dense flint glass, so adjusted that a spectrum is seen in the line of direct vision, as in the instrument known as the direct-vision spectrocope.

The micro-spectroscope, or eye-piece spectrocope, consists of

1st. The ordinary field lens of the negative eye-piece.

2d. A slit formed by two knife edges.

3d. An achromatic eye-lens, which, when used as a part of the spectrocope is called a collimating lens. This enables the eye to see a distinct image of the slit.

4th. Above this lens is placed the direct-vision prism, which spreads out the light, which forms in the slit an image of any object on the stage of the microscope, into a fan-shaped spectrum.

By this means we analyze the color rays of the light from a minute object on the stage of the microscope.

By removing the prism and opening the slit, any minute object, as a particle of blood clot, not larger than $\frac{1}{1000}$ or $\frac{1}{500}$ of an inch in diameter can be found and focused, when, by closing the slit and applying the prism, the spectral phenomena of the light which has passed through the object can be seen.

I stop a moment to say that the spectrocope applied to the microscope is not necessarily a micro-spectroscope.

Most of the so-called micro-spectroscopes in the market are so constructed that if the prism is removed the collimating lens, eye lens of the spectroscopic eye-piece, is removed with it, and it is impossible to focus any minute object so as to be certain that you see in the spectrocope the light from that minute object alone.

For example, the owner of a Sorby-Browning micro-spectroscope who reported that it was possible to see the absorption bands of a single blood corpuscle, when asked to show how it was done, found that there was no method of focusing an object only to place it in the center of the field with an ordinary eye-piece and then, removing the eye-piece, apply the eye-piece spectroscope.

This was, a few years ago, one of the best Sorby-Browning instruments, costing not far from one hundred dollars.

A physician of note who had written largely in the *Medical Record* about the wonderful power of the micro-spectroscope and the imperishability of the coloring matter of the blood after the decay or cremation of the body, was asked to show how he could exhibit with his costly instrument the absorption bands of a single blood corpuscle. He, too, failed to show it. Indeed, his micro-spectroscope had no arrangement for focusing a minute object.

Up to a very recent period none of the books on microscopic technology or catalogues of micro-spectroscopes gave any explanation of any apparatus capable of doing the work required of an instrument entitled to the name of micro-spectroscope.

All the English and American micro-spectroscopes I have seen have the defect I have mentioned.

Several years ago I so modified my own instrument that I could find and examine with certainty any object, however minute. After accomplishing this modification I learned that Dr. Jos. G. Richardson of Philadelphia had done the same thing. His article in the *Philadelphia Medical Times* is the only publication I have seen that gives a satisfactory description of practical work in the examination of blood stains with the micro-spectroscope. By his method a speck of blood scarcely visible to the naked eye, and weighing not more than one fifteen-thousandth of a grain, may be satisfactorily recognized by the micro-spectroscope.

This improvement, by which the prism can be removed and the object accurately focused, is best seen in the micro spectroscope constructed by C. Zeiss of Jena, which up the present time is, without exception, I think, the best micro-spectroscope offered to the practical microscopist.

In examining objects with the micro-spectroscope, as for example particles of blood in medico-legal cases, it is found that of the absorption bands seen in blood, one near Fraunhofer's D. is nearly or quite identical with a line seen in an infusion of alkanet in alum

water, while the other line varies so little that careful comparison is required to detect the difference in position of the lines in the spectrum of the two substances.

Some accurate method of measuring the position of absorption bands becomes therefore essential to success in practical investigations with the micro spectroscope. The first method, and, in many respects, the best yet published, is by a comparison spectrum, by which, alongside the spectrum of the object as seen in the microscope is formed another spectrum by light entering the side of the instrument, which passes through the same slit and is seen by the same lenses. By this method a suspected substance is compared directly with a well known substance which it is supposed to resemble.

This method, good, practical, and every way reliable, offers no means of forming perfect records of cases to be studied and criticised by others. If this method had been entirely satisfactory other methods would not have been eagerly sought.

The second method is by means of polarized light and interference bands, a method on which a great amount of labor has been expended, but the results are so coarse and so difficult to secure accuracy that I shall not detain you by describing the method in detail.

The third method of measurement is by a screw micrometer attached to the side of the micro-spectroscope, by which an illuminated star is made to move over the field of the spectrum, and its position, when corresponding with any absorption band, is measured by the turns of the screw and the divisions on the graduated circle through which the index has moved. This method has been modified by placing a graduated scale of bright lines on a dark field at the side of the instrument, so that the micrometer scale is seen covering the spectrum. This arrangement is effected by causing the image of the lines to be reflected by the upper surface of the direct-vision prism.

C. Zeiss of Jena has improved this method by ruling the scale so as to read the wave lengths of any absorption band seen in the spectrum. Zeiss's micro-spectroscope is also so constructed that the prism and graduated scale can be swung to one side, and by opening the slit allow the observer to accurately focus an object, however small, and then, by closing the slit and swinging back the

prism you are sure to see the spectrum formed by light passing through the object under examination.

This instrument made by Zeiss is the latest and by far the best yet offered in the market. If well constructed and used with care it is capable of performing good work.

This instrument, the latest and the best, depends for its accuracy upon keeping the eye of the observer in one exact fixed position.

Suppose, for example, that on a window of ground glass—a window of different colors—the shadow of a vertical rod outside was seen by an observer in the house in a certain position, in the red glass for example, and another shadow was seen on the green part of the window. Now let a light be placed near the window so that it will be seen by an observer as reflected from the window. As long as the observer remains in a fixed position the light as reflected will appear to hold a fixed position with regard to the shadows of external objects seen on the window, but let him move a little to one side the apparent position of the light will travel to a different part of the window.

So it is in the micro-spectroscope of Zeiss (the best yet made). The least motion of the observer's eye alters the position of the bright lines of Zeiss's scale and varies the apparent position of the absorption bands far more than the difference between blood bands and those of an infusion of alkanet or other red fluid, from which blood is sought to be distinguished.

I should not omit to mention the binocular spectroscope, or rather the spectroscope fitted to the binocular microscope, invented by Sorby, and manufactured by R. & J. Beck of London.

This spectroscope is attached to the microscope instead of the objective, and while the object is not smaller than one-tenth of an inch, it may be brought under the spectroscope and the spectrum observed with one eye or with both in the binocular microscope. There is no microscope about this spectroscope. It is only a small spectroscope attached to the framework of the microscope; but it has this advantage, that the eye-piece micrometer of the microscope can be used with it, and the position of absorption bands may be noted with the greatest nicety.

Having had frequent occasion to use every known method of detecting blood stains in medico-legal cases, I have diligently sought for assistance by the use of the micro-spectroscope. I need not detail the tedious process and expensive investigations

by which I discovered the defects of the various instruments above mentioned, and some other forms not mentioned. I found them all unreliable and wanting in the accuracy required where the life of a human being is at stake. Gradually and slowly I have discovered and constructed an addition or a new form of micro-spectroscope, by which great accuracy is secured in the measurement of the position of absorption bands seen in the spectrum of the minutest object examined by the microscope, if it is capable of absorbing any definite part of the light passing through it.

This instrument I now for the first time exhibit and describe in public. So far as I can ascertain, the construction is new, and far superior to any other micro-spectroscope yet constructed. My instrument consists essentially of a spectroscopic eye piece like the simplest form of the Sorby-Browning micro-spectroscope, as it is called, with removable prism; above the instrument thus constructed is placed a small telescope with no magnifying power whatever, the lens and eye-pieces being of equal power, having a Jackson's micrometer inserted in the eye-piece.

To describe it more in detail, I would say that there is,

1. A double convex lens of about two inches focal length.
2. About an inch above this is placed a slit formed by two knife edges of London black glass, moving by double parallel motions, both knife edges approaching the center simultaneously.

In Fig. 1, two knife-edges of black glass are cemented to the parallel bars *a a* and *b b* which are moved simultaneously in opposite directions by the screw *M*. When the screw is released, the slit is opened by the action of the spring *W*.

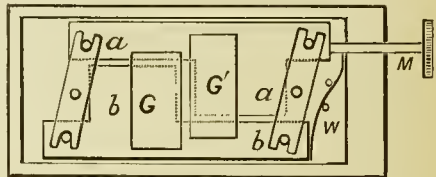


FIG. 1.

3. An achromatic collimating lens of one and one-half inch focus with the slit in focus of this lens.
4. Directly above this achromatic lens is the compound direct vision prism formed of three prisms of crown glass and two of dense flint glass.
5. A telescope achromatic field lens of about one and one-half inch focus.
6. Above this a Kellner negative eye-piece, carrying in its focus a Jackson's micrometer.

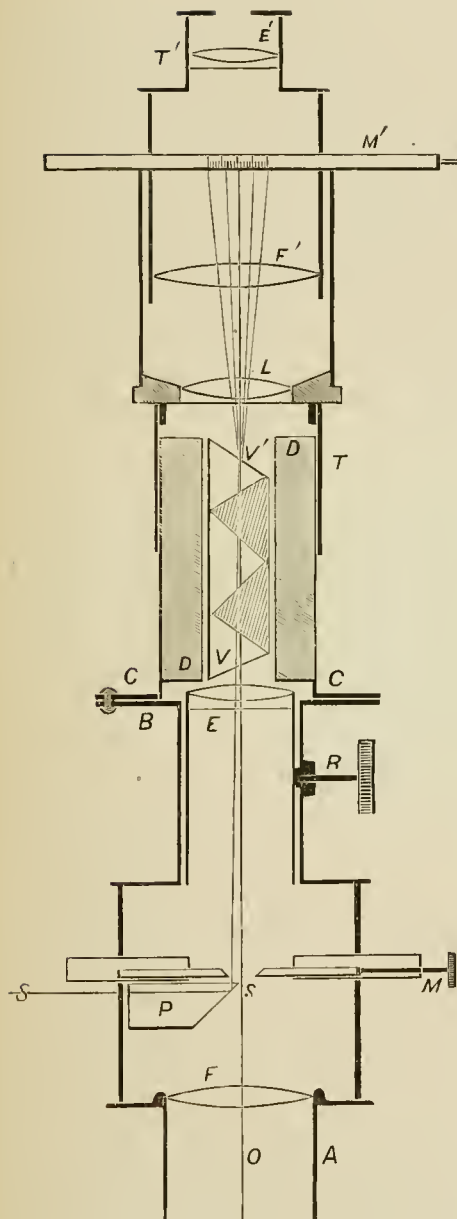


FIG. 2.

Fig. 2, shows the construction of the improved micro-spectroscope which is inserted like an eyepiece into the body of the microscope by the tube *A*. *M* is the improved slit of Fig. 1, inserted into the spectroscope. *F* is the field lens. *P* is a prism to admit the ray *S s V*, to form the comparison spectrum. The rack-work, *R*, is used to adjust the focal distance of the collimating lens, *E*. The direct vision prism, *V V'*, can be swung aside on the pivot at *C* to allow of focusing an object on the stage as in the micro-spectroscope of C. Zeiss.

T T' is the micrometer telescope with the Jackson's screw micrometer *M'*, on which the absorption bands are focused so as to be visible with the micrometer lines by the eye placed at *E*. This micrometer telescope can be removed for preliminary work, and replaced when it is desired to measure the exact position of absorption bands. There is no aberration of the micrometer lines when the eye is moved from side to side.

When this instrument is carefully focused the micrometer lines are clearly seen lying over the spectrum, marking exactly the position of all the Fraunhofer lines seen by daylight, and the exact position of every absorption band belonging to the object under observation, with not the least trace of aberration as the eye is moved from side to side. This advantage does not attach to any other micro-spectroscope yet constructed, so far as I am acquainted.

The slit constructed of glass is, I think, less liable to be obstructed by dust than any slit made of metal knife edges.

Another important superiority which I claim, is that the micrometer which I use, consisting of black lines ruled on glass, does not interfere with the view of delicate absorption bands on small objects like blood corpuscles as do the bright lines of Zeiss' micro-spectroscope.

TREATMENT OF INTERMITTENT FEVER IN ALL ITS FORMS.

BY A. BEARDSLEY, M.D., BIRMINGHAM.

A paper read before the New Haven Medical Society at Waterbury,
April 12, 1883.

Mr. President and Gentlemen of the Society :

The chief object of a Medical Association should be the diffusion of practical knowledge among its members. Ever learning, and never satisfied with the experience of others, the physician who has grown gray in practice and become a shining light among us, is still a learner, and often finds that the study of clinical facts are more reliable as aids in the healing art, than speculative reasoning, or prescribed rules of medication laid down in the books. True it is, that with all the light of more than three thousand years, we are still very far from the attainment of absolute knowledge of the essential nature and best treatment of almost any disease, and perhaps we hazard little in saying that such exact information can never be reached. But such is our profession, and our aim should be to settle the value of all pretensions to medical skill upon the broad basis of general principles, deduced from known and established facts.

Tracing the history of medicine from its origin, we learn that few ages indeed have rolled away without being marked by some striking discoveries favorable to the advancement of the healing art. In the days of Æsculapius, in whose temple medical information was first recorded, medicine existed only nominally among the priesthood and the shattered fragments of Grecian lore; but when the observing Hippocrates arose, he arranged clinical facts based upon the principles of inductive philosophy which obtained for our profession the proud name of science. It is amusing, how-

ever, to look into its history and see how the opinions, the fashions and pretensions of medical men and supposed remedial agents from time to time have operated on the confidence and credulity of mankind. The "roasted toads of Vogel," the "Amulets of Capellus," the "touch of King Edward," the "Elixirs of Paracelsus and Van Helmot," and a host of others equally ridiculous, have had their day and claimed from many a poor victim, racked with pain, an honest belief in their power of absolutely removing disease. We may laugh and be thankful that these delusions are buried in the past; but then in modern times we have stick doctors who cure by a sort of "hocus pocus, high Jack Barnabus"; our Steamers, armed with caloric and lobelia, who expand all diseases upon the principle that heat expands all bodies; our Hahnemanns, who cure by the magic power of trituration; our Hydropaths, who hit all cases through the capillaries with the wet sheet; our Electricians, who restore all the vital functions with lightning speed; our faithful few who cure by approaching the throne of grace and laying on of hands, and hundreds of others; but last and not least of all comes the medical adviser dubbed with the title of M.D., with his clairvoyant or lock of hair, and unravels pathology as by inspiration, and points the despairing patient at once to the fountain of all theurapeutic wisdom. Now all these have their followers, while multitudes in society from the highest to the lowest, from the learned to the unlearned, are to day swallowing down patent or secret remedies by the cargo, because labeled with printers ink, "a sure cure."

Then our own age, with all its learning and research, deserves well to be laughed at. But while the true physician is disgusted at the empirical views and practices of others, the man of sober common sense thought is often astonished at the discordant opinions existing among physicians themselves. In theory there are about as many minds concerning the proximate cause of fever as stars in the skies, while in *practice*, one doctor thinks calomel the king of remedies, and gives it in almost all cases; another calls it a life destroyer and does not give it at all; one bleeds with the boldness of Rush, another physics with the energy of Sydenham; one abounds in the stimulants of Brown, another rides the gum water of Brussais; a specialist through his speculum finds few diseases in practice to treat except uterine; some agree only on the "*vis medicatrix natura*" of Cullen; others

practice the "gastric hobby" of Abernethy; while some rely mostly on quinine, including the last sample compound that comes through the Post Office and so on, while a wiser than all adopts an exclusive system of "Grahamizing" as a catholicon for all the ills that flesh is heir to, thus verifying the old saying that "doctors disagree."

But amid all this conflict of opinion and experience *medical*, and more especially *surgical*, science has been directed in the onward pathway of improvement. *Never* has our profession, bating some conventional dogmas, sustained a more elevated character than at present, and new facts and discoveries are being daily brought to light. It is true we have no monarchs in our science in this age; our Hunters and our Cullens, our Bells and Bailies, and so on, are gone, but then we have an illustrious band of American and European geniuses, who spare no pains in improving the condition of our profession. In truth, the unexampled activity of the human intellect, through medical schools and the medical press, the boundless zeal in exploring the animal economy in health and disease, the researches of the specialist, the discoveries of the microscope, etc., and the improvement in the education of the general practitioner are rapidly bringing equalization among the members of the medical profession. Happy, happy doctors, who live in this nineteenth century!

I beg your pardon, gentlemen, for making these remarks prefatory to the subject of my appointment, viz.: "The treatment of Intermittent Fever in all its Forms." You see the theme is pretty broad, and I shall confine myself to the disease and its treatment as they have from time to time fallen under my own observation. Whether this fever, with all its modifications or organic complications, is generated from bad or foul air, the marsh miasm of the old authors, the germ theory, which is "seen through a glass darkly," or the epidemic idea that its etiology consists in a specific something, produced by its own cause, traveling in eccentric lines, I will not stop to inquire, but this latter theory, made so conspicuous on the map, does not, to my mind, explode the doctrine that paludal influences generate, keep alive, and intensify intermittents, independent of any settled principle known to our profession on epidemics. Facts are more valuable than theory.

My first knowledge of intermittent fever was fifty-seven years ago. I lived with an uncle who was a drover, and for many years

drove large herds of fat cattle every few weeks to New York. In the fall months he often contracted this disease at a place called Bull's Head, a spot reeking and foul from miasm, engendered from animal and vegetable decomposition through all the summer months. One fall he was long sick with a tertian ague which baffled the skill of such notable physicians as Drs. Buckley of Monroe, John Judson of Newtown, and Elijah Middlebrook of Trumbull. The patient was of robust constitution, and his paroxysms of the ague were fearful. I knew the treatment well, for I waited on the doctors and gave their medicines of bark in large doses, London porter, tinct. musk, with opiates and diffusible stimulants. Failing to break up the chills after three weeks, and patient growing feeble, Dr. David Hull of Fairfield was sent for, who suggested his famous physic, which was aloes and spices, well known in our shops as "Hull's Physic." Liberal doses of this preparation were advised, with the addition of twenty grains of calomel to each dose until free alvine evacuations were procured. A change so radical in the treatment was opposed by Dr. Buckley, as the patient was very low, but Dr. Hull prevailed and the patient recovered rapidly, but he ever afterwards was shy of "Bull's Head."

A few years before I located in Newtown, in 1834, a dam was built in the lower section of the town, flooding some thirty acres of swampy land. The dam was carried away in the winter after three years, and the coming fall, for an area of one mile or more around, intermittent fever was prevalent, which was never known before in that neighborhood. The most successful treatment in that endemic, I was informed by Dr. John Judson, was evacuating freely the stomach and alimentary canal with emetics and cathartics, followed by tinct. bark and other tonics.

I came to Derby in the fall of 1836, and from that time until the building of the Ousatonic dam, about fourteen years ago, I never met with intermittent fever except as it was imported from other towns, only in a very few cases. After its visit to Hamden and Woodbridge it struck the valley of the Ousatonic, and in 1871, 1872, and 1873, take it from below the dam, not a single family (don't except one) on the eastern shore of the river as far up as Bennett's Bridge, the extent of my ride, escaped malaria. I appeal to Dr. Pinney, whose practice up this region is extensive, for the truth of my statement. Whole families, including nursing babes not over six months old, were shaking with ague. It was less

prevalent upon the opposite shore, owing perhaps to a more sparse population. I confess that I gave more quinine in one form or another there than I do now, not, however, without prescribing appropriate alteratives.

To show the value of my treatment without heroic doses of quinine, I cannot better illustrate it than by citing a few cases under my own observation. For instance, one man and his family, tired of living on quinine, asks me is there no remedy for these chills except this expensive drug? Oh, yes; try something else; I will give you a box of my pills, which contain not a particle of quinine. Take one at bed-time three or four times a week, and drink boncset tea sweetened with molasses freely until it purges. I soon found that my patient had not only cleared one swamp of Eupatoreum, but he was actually supplanting me in my business by telling his neighbors that he could keep off the ague without quinine. Some three or four families followed his example at my expense, but they had to get my pills, which were simply aloes, blue mass, and capsicum, equal parts. I am dealing in facts, and you can judge of their value as well as myself.

Called in consultation to see a patient with severe quotidian intermittent, fifteen days after her confinement; lacteal secretion checked; pulse 120; temperature 99; tongue heavy coated and dry, with red edges; nausea, delirium, and countenance icterode. She was taking quinine in what I should call large doses for such a case—thirty grains in twenty-four hours—with stimulants and anodynes. I suggested a pill of aloes, calomel, and rhubarb, equal parts, every two hours until the bowels moved thoroughly; drop the quinine and substitute an aromatic bitter of gentian, serpentaria, and seeds with bi-carb. soda. After the operation of the alterative patient rapidly convalesced, without another paroxysm of chill and fever.

I had a female patient, full habit, fifty-four years of age, in 1878, from New Haven, sick with intermittent fever of some days' standing, complicated with cardiac rheumatism. She wanted her old physician from the city to see her, and I was quite willing. He advised quinine in 20-grain doses every three hours. That was the way, he said, they broke up the chills in New Haven. I said my plan would be to open the bowels freely with a mercurial cathartic and then follow up the quinine in 3-grain doses, instead of 20 grains, every three hours during the apyrexial stage. The

latter course was adopted, and the patient rapidly recovered from this disease. Was it the cathartic or was it the quinine that proved so decidedly curative? You will probably answer, both combined. I could cite numerous cases where patients who have heretofore taken liberally of quinine for intermittents, but have been more successful in using simply remedies acting on the hepatic secretions, combined with aromatic bitters, without quinine. I say numerous, for I can recall patients by scores of recent date, and give you their names, whose diseases were unmistakably malarial, yielding to the alterative treatment without one particle of quinine. In eight cases out of ten there is more or less manifest functional derangement of the liver, and I have been so successful with the kind of treatment to which I am so partial that if I should be obliged to abandon either method of medication in malaria, I certainly should strike from my list of remedies quinine.

In the various forms of intermittents, for fear of being tedious, I will only instance two out of many. In 1880, Mrs. D., age eighty-four, of good constitution, was sick with what I diagnosed typho-malarial fever. Her life was despaired of when she fell into my hands. She had been properly treated on the homeopathic plan, for two weeks, by a judicious and learned physician of that school. Every other day, about 2 o'clock, P. M., she had alarming death symptoms, such as nausea, vomiting of bilious matter, great prostration, cold sweats, delirium, Hippocratic countenance, etc. I had treated her in the past for intermittent fever. I gave her alterative doses of aloes and blue mass, and during the apyrexial stage, as her stomach would tolerate, administered strong infusion of bark, gentian, serpentaria, with aromatics and bi-carb. soda. She recovered, and has since enjoyed good health.

The same year, in the same neighborhood, I was summoned to see Mrs. B., the messenger saying she was lying in a fit; age seventy-four; full habit, apoplectic build, weight over 200 lbs. I found her with stertorous breathing, loss of voluntary motion, cold sweat, symptoms of strong cerebral congestion, etc. I halted between two opinions as to the use of the lancet, but relied on other means as best I could, and gave a prognosis decidedly unfavorable. The next morning I was surprised to find my patient sitting up in bed, complaining of soreness of the flesh, headache, nausea, and occasional vomiting. I suggested that this might be malaria in an ugly form, only to be laughed at; but the next day, about the same

hour, I was again sent for, and found her apparently in another apoplectic fit. I at once made up my mind that this was masked malaria, and as soon as she could swallow I gave her a brisk mercurial cathartic, followed by bark and bitter infusion, with warm aromatics. She recovered, to have a similar attack a year afterward, though in a milder form.

Quinine, however persistently given, will not cure intermittents while great functional derangement of the liver is neglected. Two or three months ago a tall, stout man, from the interior of Fairfield county, yellow as an Egyptian mummy, walked into my office and despondingly asked if I could cure chills and fever. "Yes, sometimes. How long have you been afflicted in this way?" "Over six months, and I have lived on quinine, as my doctor said nothing else would do me any good, until, if I keep on, I shall have to mortgage my farm to pay the bills." I counted him out twenty-four pills of biniodide mercury, 1-16 grain, and told him to take one pill night and morning, and drink freely of boneset tea sweetened with molasses, until it purges. Drop the use of quinine altogether. I never expected to see him again, but he has called on me and said "the little red pills had done the job, and he wanted some more to keep on hand." He took no preparation of bark after taking the biniodide. I am simply dealing in facts.

In the various forms and complications of intermittent fever, the same general principles should govern the treatment, modified of course by the character of the diseased condition of the system in any given case, whether it be typhoid, local inflammation, apoplexy, rheumatism, palsy, or any morbid function to which the patient may be constitutionally inclined. Keep this in view.

I have thus, gentlemen, given you the treatment of intermittent fever as it has fallen under my observation for the last half century, without reference to books, or indulging in theory. You may differ with me, but without citing the hundreds of specifics I have seen used in this disease, I am satisfied the treatment I have shadowed forth in these hasty remarks, will prove the most successful in the hands of the judicious physician.

I cannot speak of other localities. I recollect only one of the fraternity, Doctor P. A. Jewett of New Haven, who, years ago, impressed me with the importance of the alterative treatment of intermittents.

As a general thing, physicians, in my opinion, are more lavish in

the use of quinine in this disease than is necessary. I have never administered heroic doses, as I have been more successful with smaller ones given at short intervals, and as I believe exerting a more salutary effect. Where some physicians use 100 grains a day on a patient, I would succeed with three grains given every three hours in twenty-four. We have now, I believe, some forty or fifty different preparations, combinations, alkaloids, etc., of cinchonia, some almost worthless, others valuable, but none equal to the quinine, *per se* properly administered. The pious and learned Dr. Boerhaave, who flourished more than two hundred years ago, collected and arranged the remedies used by all the physicians, retaining the good and rejecting the bad. Who in this age is wise enough to follow his example? The simplest method of treating and fulfilling the indications of almost any disease is generally the safest and most successful. The physician who prescribes, without close examination, the various combinations now being crowded upon the profession, is in danger of not "proving all things," nor even "holding fast that which is good," besides being amenable to the charge of wandering in the fields of experiment.

While Theology is drifting from her ancient moorings and becoming more progressive and tolerant in matters of faith and belief, and while the fundamental principles of law and justice are so often perverted through the meshes of our honorable courts, it is no stigma upon our noble calling, which so much involves the temporal welfare of man, that honest differences exist among us, especially in the department of Theurapeutics. We must admit that intermittents are cured outside of "the regulars." With such diversity in the methods of cure we are forced to be liberal in our views, and heeding the lessons of clinical observation, we should apply their philosophy to our credit, and to the good of our patients. In a word, we must be eclectic.

Gentlemen—I thank you for your attention, and hope I have said nothing to impair your confidence and devotion to a profession which numbers among her votaries so many honorable, learned, faithful, and humane benefactors of the human race.

OBSERVATIONS ON NINETY-TWO CASES OF KNEE JOINT DISEASE IN CHILDREN.

By J. J. BERRY, M.D., OF SOUTH NORWALK, CONN.

There are certain ailments which physicians always view with feelings of apprehension and disappointment; and with reason, for in them more than in all others are we unable at times to venture a prognosis, or to decide upon a satisfactory plan of treatment. Such diseases are variable in their course and uncertain in their terminations. They simulate many other diseases, their approach is insidious, and they are noted for their persistency. Much has been written of late years concerning diseases of the joints. Their pathology has undergone revision, and their treatment has developed a surprisingly large number of methods.

The strictly expectant plan may be said to have fallen into general disuse; in fact, a large proportion of the profession condemns in unmeasured terms all those methods which depend for their success upon the healing powers of nature alone. So universally have these views been held and carried into effect, that we have at our disposal numerous tables of statistics in which cases of exsection and the like are quoted by the hundreds. But can we refer to tables of any length which illustrate the expectant plan of treatment? I believe there are very few in existence, and it was from the conviction that we had no such reliable *data* that I was led to prepare this paper.

By reference to the considerable number of cases which certain appointments have enabled me to here present to you, one plan of treatment may be placed in contrast with the other, and conclusions drawn therefrom. I would not lead you to infer that I am advocating the "let alone" method which overlooks so many forms of surgical therapeutics, and is of itself of a most primitive character, yet I am led to imagine that a knowledge of how well and how satisfactorily some of these cases take care of themselves, will prove reliable alike to the operative and to the conservative

surgeon. The pathology of bone disease rests, as before stated, on an uncertain basis. We fix our hopes on a theory to-day—we discard it for a newer one to-morrow. One day we are confident that the disease has its etiology in traumatism; the next, we have grave doubts as to whether it is not wholly tubercular. Any conclusions therefore which can claim to be more than theoretical possess an element of value. It has been thought expedient therefore to refer to the general pathology of bone inflammation, and to consider the prognosis of the disease in its various relations. Acute affections of the joint, as peri-arthritis, acute synovitis, and others which run a rapid course, I have not tabulated here, for their etiology, pathology, and prognosis differ widely from the same in the chronic forms. With one or two exceptions, osteitis and synovitis are the two chronic lesions, proper, of the knee joint, in children.

Of ninety-two cases, sixty-eight were of articular osteitis, and twenty-four of chronic synovitis. That there may be no misinterpretation of statements regarding the two diseases, let us pause a moment to define their pathological differences, and the symptoms peculiar to each.

The one is primarily and without exception, a bone disease. Its location is dependent somewhat on the variety in question. It may begin in the medulla or compact tissue of the lower portion of the femur, or may begin as a periostitis and progress towards the deeper parts; more frequently its starting point is in or near the epiphysis. At the outset or in its primary stages it is not related to the contiguous point, but may become so in the course of the disease. Synovitis, on the other hand, is, from the first, a joint disease. Its inception is in, or in close relation with, the synovial membrane, and remains so until late in its history. I may be allowed to quote from a previous article* certain anatomical points which are indispensable to a proper appreciation of these forms of bone disease, for they go far to explain their etiology, date of appearance, and subsequent course. "The cancellous tissue has been described as differing from the compact variety only in degree of condensation. But there are other points of dissimilarity. It is the location of anastomosis between the arteries of the shaft, epiphysis, and perichondrium, though no

* N. E. Med. Monthly, Oct., 1882.

distinction can be made between the portions supplied by each system of vessels. The venous supply is large and has its exit through the numerous apertures at the extremity of the femur. The walls of the vessels being enclosed in a bony sheath, were extremely thin and delicate, and are consequently very susceptible to injury. The cancelli surrounding the venous canals are in free communication with the latter by numerous vessels which perforate the walls of these spaces. The vascular network is more defined near the epiphysal line, but its exact relation to the shaft varies with the degree of ossification attained; blood-vessels reach out beyond the newly formed osseous tissue into the adjacent cartilage, but there is little vascularity about the periphery of the head. The extreme congestion of this portion of the femur is especially apparent during the first few years of life—so great is it that there is resolution of newly formed tissue, and older portions of bone are replaced by newer formations." We should expect, therefore, greater susceptibility to disease at this period of life, and our statistics confirm this impression, for of the sixty-eight cases, the average date of inception was found to be the age of four and a half years. In synovitis, however, in which the pathology is so different, we have no reason to look for its appearance early in life, and my tables show that in the twenty-four cases referred to, the age of inception averaged eight years. These figures cannot be considered wholly reliable, as my observations were confined, in these cases, to children only, and we know that while osteitis is most rare in the adult, synovitis is one of the most common diseases of maturity.

The mortality arising from the expectant method is not so great as one would naturally expect. Of ninety-two cases, death occurred in nine, of which latter, one was from septicaemia, seven from asthenia, and one from Bright's disease of the amyloid variety. Considering the extensive and prolonged suppuration which occurs in so many cases, we should expect to find blood poisoning among the most frequent causes of death. Yet this is not the case, for many more succumb from simple exhaustion.

Tubercular meningitis is occasionally noticed as a complication, yet it is much more apt to be associated with disease of the hip or spine. It appears, as a rule, late in the affection, and its course is rapid and destructive. Waxy degeneration is a rather more frequent complication. In some of these cases this lesion of the

kidney was noticed, but no dangerous symptoms supervened while the patient remained under observation. In cases of hip disease we recall several fatal results. This affection of the kidney or liver seems, in some instances, to have been cured or relieved by operative measures. We recall one instance in particular, in which amputation at the lower third of the femur for knee joint disease was followed by entire disappearance of all symptoms of amyloid degeneration. Suppuration is necessarily attendant upon both varieties of disease, and is of equally frequent occurrence in each, though in synovitis it is usually noticed somewhat earlier. Of the ninety-two cases there was formation of pus in thirty-five. In disease of bone, here as well as elsewhere, suppuration is often delayed until late in its course. Several months, and occasionally two or three years, may elapse before an abscess appears about a joint, and even then it increases in size so slowly that its final evacuation may require an equally long period of time. It has been for a long time admitted that osteitic disease of the joint produced not only expansion, but growth in the long diameter of the femur; this has been proven by measurements taken by Iutland, Helferich, and Wagstaff, which, though conclusive, were not upon a large scale. The following are the results of examinations of sixty-eight cases of articular osteitis:

In 2 cases there was	1 inch	lengthening	of the femur.
" 10 "	" "	" $\frac{3}{4}$ "	" "
" 19 "	" "	" $\frac{1}{2}$ "	" "
" 18 "	" "	" $\frac{3}{8}$ "	" "
" 8 "	" "	" $\frac{1}{4}$ "	" "

In six there was an average shortening of $\frac{3}{8}$ inch, while in five no change in length was appreciable.

In synovitis, however, there was found either an arrest of growth or, what is more rare, a real shortening of the femur. The table of twenty-four cases shows that

In 5 there was	$\frac{1}{3}$ inch	elongation	of the femur.
" 3 "	" "	" $\frac{3}{8}$ "	shortening "
" 2 "	" "	" $\frac{1}{2}$ "	" "

14 remained unaltered.

In cases of osteitis of the head of the tibia, which is not very rare, there is also an appreciable lengthening of the limb. In eight of the eleven cases tabulated, this was more or less apparent.* In obtaining these measurements there is a constant source

* Boston Med. and Surg. Journal.

of error, which must be taken into account. We must not forget that there is a normal variation in the limbs of perfectly healthy subjects which is often considerable in amount, and sometimes misleads. The duration of the disease before measurements are taken must also be taken into account, for there is absolutely no bony growth after the epiphysis has become united to its shaft, and ordinarily very little during the first six months, or after the first two years of the disease. It seems to us that the age of the patient forms one of the essentials of a correct diagnosis, for of all the cases under observation we recall none in which osteitis began after the fourteenth year.

The ultimate result secured by the expectant method of treatment has long been a matter of interest to specialists as well as others, and the question has often been asked as to how they compare with those attained by operative procedures. The condition of the limb involved is here shown. Of ninety-two cases,

In 15 cases there was firm ankylosis.

“ 20 “ “ “ slight motion.

“ 15 “ “ “ motion over an arc of 30 degrees.

“ 32 “ “ “ “ “ “ 90 “

“ 10 “ “ “ “ “ nearly perfect.

To what extent the success attained was attributable to the method employed cannot be stated. The object invariably was to secure the most perfect fixation of the joint and to constantly maintain it; little or no motion, whether active or passive, being allowed until the period of convalescence.

In a considerable proportion of cases a certain amount of deformity has been noticed. In the progress of the disease several anatomical changes occur which aid in producing this condition. We have those arising from immobilization of the limb combined with those resulting from the disease itself—such as bony enlargement of the femur at its lower third, located most generally in the internal condyle, and producing not only a certain amount of genu valgum, but indirectly, sub-luxation of the tibia and fibula. Some of these conditions are invariably present in all cases which have come under treatment. There may be cases of marked sub-luxation in which a considerable degree of motion is preserved, and there remains a very useful joint. In short, ankylosis is not the best possible result which may be hoped for, for while fusion of the joint surfaces cannot be overcome, muscu-

lar atrophy, shortened ligaments, and other periarticular changes can be in part remedied. Oftentimes patients who have been discharged with great joint stiffness and difficulty of locomotion, will experience from the effects of exercise alone marked improvement, the limb becoming stronger and more flexible.

I have thus endeavored to present in a brief way the phenomena of joint repair in those cases which will be most apt to come under the observation of the practitioner. Should he be conservative in his mode of treatment he will find herein much encouragement, and perhaps a confirmation of his own opinions. Should he advocate the strictly surgical treatment of such diseases, some advantage may be derived from the study of their natural history as here given, and inferences may be drawn which will cause him at times to hesitate before resorting to extreme measures. There are in both methods of treatment much to criticise, but there is a middle way in which one may walk with greater safety.

ESSAY.

SOME POINTS IN ORAL SURGERY OF INTEREST TO THE GENERAL PRACTITIONER.

BY GEORGE L. PARMELE, M.D., D.M.D.

[Presented to the Ninety-Second Annual Meeting of the Connecticut Medical Society, May 23, 1883.]

I should much rather at this time be a silent listener to words of wisdom and instruction from those older in membership in this Society and profession than myself, and consequently better qualified to be one of your essayists at this our ninety-second annual convention; but as you have seen fit to detail me for this task I will not shirk it, as I should be pleased to do, but endeavor to present for your consideration a few ideas concerning the specialty I have adopted, which I hope may not be without interest to you.

Contrary to the prevailing idea, dentistry is not of recent origin. The Egyptians had specialists in every department, and it is claimed that artificial dentures of wood, ivory, and gold have been found in the jaws of mummies. It has also been asserted that fillings of gold have been found in their teeth; but recent investigations by several English dentists of high repute tend to throw discredit on this statement, and they incline to the belief that the teeth were only gilded, as often times were their faces, as a means of decoration. On the other hand, there is the authority of Sir Gardiner Wilkinson, who states that he has seen teeth filled with gold in the mouth of a mummy at Thebes, and the fact that Herodotus mentions the existence of both oculists and dentists as specialists among the ancient Egyptians, makes the statement appear probable.

Hippocrates, 500 B. C., and Aristotle, 350 B. C., wrote largely on the teeth.

Celsus, 100 B. C., recommended the use of the file for removing the sharp edges of carious teeth.

Galen, A. D. 100, treated the subject more extensively than any ancient author.

Ætius, an Arabian, A. D. 300, discovered the apical foramen through which the nerves and vessels enter the dental pulp.

From this time until the latter part of the middle ages, the practice of this specialty, like that of surgery, fell into the hands of mechanics. But about the time of the revival of surgery some advances towards modern dentistry were made. Among the writers of this period were such men as Fallopius, Eustachius, and Paré. Later came John Hunter, and others of his day. Dentistry in those days consisted mainly in the construction of artificial dentures, and was practiced as an art, by jewelers—as a century or two before rude surgery was performed by barbers.

During the eighteenth century the practice of this art began in America, but it was soon discovered that for the intelligent and successful treatment of the teeth some anatomical knowledge of these organs and the surrounding tissues was necessary, and the better class of those engaged in this calling began the study of their anatomy, physiology, pathology, etc., and some medical men began to engage in the practice.

Societies were organized, journals and text-books published, and about 1839 the first dental college was established. American dentists soon became acknowledged of superior skill the world over. At this time the almost universal remedy for nearly all diseased conditions of the teeth, except simple caries, was the forceps and the substitution of artificial teeth. Now, exposed and inflamed pulps are saved alive; abscessed teeth, atrophied sockets, and necrossed jaws, are successfully treated and saved; extraction, except in extreme cases, is considered malpractice.

Dental deformities are corrected; fractures of the maxillae, diseased antra, and all abnormal conditions of the mouth, are considered as coming within the province of a thoroughly educated dental and oral surgeon. Not only this, but by proper prophylactic measures in the young, impairment of these organs is, to a great extent, arrested.

But while scientific dentistry has rapidly advanced, empiricism has not been idle, and it would be impossible to estimate the

amount of injury inflicted by the quacks with which the country abounds.

The Society for the Prevention of Cruelty to Animals protests strongly against vivisections; for original investigations, would it not be better employed in waging war against the wholesale extraction and mutilation of the valuable organs under consideration?

The importance of good teeth to mankind is greater than is appreciated by many. Like the eye, ear, tongue, and other special organs, they are designed for a life service, and their preservation contributes valuable service to the human economy, while their premature loss is of serious damage to the whole body.

In a late report of the Odontological Society, of Great Britain, Edward Canton, F. R. S., gives a large number of cases of habitual constipation, with enormous accumulations of faeces in the descending colon and distressing symptoms of all kinds, which were distinctly traceable to absence of, or a diseased condition of the teeth, to such an extent that mastication was not properly performed, and where treatment was without avail, until the masticatory apparatus was put in proper condition, when the constipation was cured. He says: "It is well known that imperfect mastication of food is a common cause of diarrhea, but few medical practitioners appear to be aware that habitual constipation is not unfrequently due to this cause."

"It is, in fact, scarcely possible to exaggerate the importance of proper mastication of the food. It should be reduced by the teeth to a complete pulp, and unless so reduced the digestion is sure to be deranged and general lowering of health will follow. The imperfectly digested mass, which passes through the pylorus, does not take up a proper amount of bile, nature's purgative, and the consequences which I have just been describing follow as a matter of course. I have said that imperfect mastication always causes more or less general impairment of nutrition; this is sometimes very marked: the patient continues for some time thin and weak, and at last falls an easy victim to any illness by which he may be attacked. In women this general low state of nutrition greatly predisposes to barrenness. A young lady was brought to me by her husband; she had been married for some time, but had no family. She was thin, "nervous," had no appetite, suffered from indigestion when she did eat, was restless at night, and had bad

dreams. I asked her if she masticated her food properly, and she answered, "Oh yes;" but, on looking into her mouth, I found that her teeth were very badly decayed. I recommended the supply of molar teeth; they were adopted, the lady got stout and strong, soon became pregnant, and eventually had several children. So marked was the improvement in her health, and so evident the connection between this and the subsequent pregnancies, that when the husband paid me an occasional visit, and I asked after his wife, he used to answer, "Oh, she is quite well, thank you, Mr. Canton, *she does not want any more teeth!*"

Dr. Oliver Wendell Holmes, in a commencement address delivered before the students of the Dental Department of Harvard University, after speaking in his happy strain of the value of the teeth in relation to the beauty of the human countenance, says: "But we must add to this the consideration, that speech is so largely dependent on the perfection of the teeth, that language, we might say, loses a little with every tooth that falls. What can be more painful to witness than the efforts of a hapless friend to bite his consonants out of the alphabet when he is reduced to the condition of the infant, whose boneless gums are unfit for any task but the caressing pressure of the maternal mouthful!" "And then the humbler, but still necessary function of mastication, how much depends upon the ease and perfection with which this is performed! You can tell the state of a village by going to the mill. If it has enough to grind, and grinds it well and cheaply, you will find good farms and well fed people; so if you see a good square jaw, filled with good sound teeth, and moved by a set of muscles that mean business, and do it, you will find in all probability, that they nourish a sound frame in man or woman." The teeth and their surrounding tissues, connected as they are through the fifth pair of nerves with the centers of innervation and the vasomotor system, do undoubtedly, when in an abnormal condition, exert through the ramifications of these nerves a baneful influence through the body. I am continually impressed with the ignorance of the public in regard to this matter of so much value to their general health, that if they could only be made to understand more fully about it, I think they would be saved a great amount of suffering, to say nothing of saving them from bad dental practice, which instead of encouraging the preservation of these useful organs, hasten their destruction and loss. Even physicians are

not as well informed on this subject as they might be, to advantage. As medical colleges are now conducted, medical graduates go forth in as great ignorance of diseases of the teeth as do dental graduates of general disease. Lest you think me opinionated in my views on the subject, let me quote what I heard J. Marion Sims, M.D., say at a meeting of the New York Odontological Society. "As to the effects of diseased teeth upon the general health, I wish medical men generally could be better educated upon that point. We are all familiar with the fact that decayed teeth frequently cause neuralgia; and this is the extent of medical education on the point. They usually do not recognize the fact that, as a general thing, decayed teeth, teeth with inflamed alveolus, with matter exuding from around the teeth, are the means of producing more nervous disorders, more terrible consequences to the general health, than almost any other thing that can happen.'

Some simple knowledge of this subject would enable the medical man to treat them more successfully than he does. It is a matter of regret that medical men generally have so little knowledge of this subject." He related numerous cases to illustrate his views.

At the same meeting Dr. Frank Hamilton expressed similar views.

Samuel Sexton, M.D., Surgeon to the New York Ear Dispensary, in the *American Journal of Medical Science*, says: "The apathy which has always existed on the part of the profession regarding this subject has left the treatment of diseases of the teeth in the hands of men who have occupied themselves almost exclusively with its mechanical department, and who, as a rule, have but little to do with the teeth in a medical aspect. It is greatly to be regretted that a field of such interest has been abandoned by the profession. Many affections of the teeth lead to most grave and intractable diseases of the regions presided over by the sympathetic system, which are often suffered to be long unattended before they are brought under appropriate management. Thus an ear, eye, or throat difficulty may become firmly seated, or a neuralgia, which renders life intolerable, established. When I look back at the operation for the removal of Meckel's ganglion, which I twice witnessed, for the relief of facial neuralgia, it occurs to me that the most simple of remedies could have controlled that disease when it was first induced, as was probable in these instances,

by a carious tooth. I think you will find Dr. Sexton's article well worthy of perusal.

I cite the following case from my own practice—a simple one—as showing long continued unsuccessful treatment of neuralgia of about five years standing, of the trifacial nerve, caused by a periodontal abscess opening into the antrum, and causing severe neuralgia, with the absence of pain in the teeth, which caused the trouble.

Mrs. H., aged 50, was referred to me September, 1881, by Dr. C., for treatment. I found the left superior canine with its crown missing, and the root loose from chronic periodontitis. The bicuspid and first molar were missing, and half an inch above the margin of the gum, at a point formerly occupied by the second bicuspid, a fistulous opening was discovered, which upon probing, was found to lead to the antrum. Removal of the canine root was followed by a slight discharge of pus, and a probe passed into its socket also entered the antrum. Surrounding each of these openings was carious bone, greater in amount, however, at the canine opening where the maxilla was dissolved, for a space half an inch in diameter.

Having thoroughly removed all diseased bone with bone-cutting burs, in the dental engine, I then, by means of a small tube attached to a fountain syringe, allowed about a pint of warm salt water to flow into the antrum at the anterior opening, which made its exit at the posterior opening.

By changing the tube to the posterior opening, I reversed the current, thus insuring thorough cleaning of the sinus. This was followed by an injection of,

℞ Eucalypti (Sanders' Sons), ʒ i.
Iodoformi, gr. x.
Aquæ, ʒj.

M.

Then a tent of candle-wicking saturated with glycerine and eucalyptus, was passed into the antrum at the anterior, and brought out at the posterior opening where the two ends were tied together. A few days later floss silk was substituted for the wicking. This treatment continued a week, when the tent was omitted and the patient being instructed, from that time, kept the parts clean herself. In a month, after a few stimulating injections of

℞ Zinci Sulphatis, gr. iij.
 Plumbi Acetatis, gr. v.
 Tincturæ Catechu, gtt̄s. x.
 Aquæ, ℥ i.

M.,

the parts had regained their normal condition, the neuralgia disappeared, and the openings gradually healed. The fountain syringe for thorough cleansing of the antrum I find very useful. I have never seen its use for this purpose mentioned, nevertheless it may be an old idea, though new to me. It is more easily managed, either by operator or patient, than any other form of syringe.

I have always believed that dentistry ought never to have been established as a separate profession, but that any one desiring to practice in any department of medicine should be required to follow a regular medical education, and then to perfect himself in the desired specialty.

I think that a few lectures on dental pathology, introduced into our medical courses, would be of great value to the general practitioner. I desire to ask the coöperation of the medical profession in the preservation of the temporary and deciduous teeth. You come more in contact with the little ones, and have better chances of observing their mouths, and of giving advice to their parents than the dentist.

The deciduous teeth for the most part receive attention only when the sufferings of the child render palliative treatment necessary. Perhaps you are not fully alive to the consequences, direct or indirect, of the premature loss of these organs upon the future health and comfort of the child.

On these teeth to a great degree depends, not only the regularity and usefulness of the permanent set, but the perfection of the whole physical organization. At no other time in life are sound, serviceable teeth more necessary as aids to digestion than during these years of growth and development. It is therefore a sad mistake when temporary teeth are permitted to be prematurely extracted. Serious may be the consequences when days and nights of odontalgic pain are suffered to elapse without mitigation. In fact, the health and welfare of the individual may be seriously impaired by a neglect of the treatment which these teeth demand in the majority of cases. Parents have not been educated as to their value, and a great many dentists practically ignore the matter

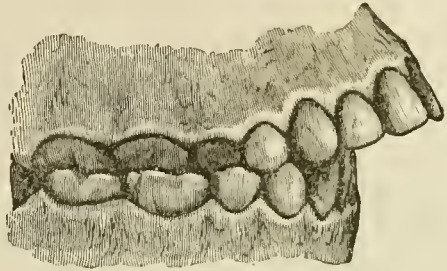
because of the difficulty and tediousness of operations on the teeth of young children, and because these cases do not directly pay pecuniarily.

I would not have you construe what I have said concerning premature extraction of these teeth in meaning that they should never be extracted, for oftentimes the removal of some of them is an absolute necessity, as for example, an alveolar abscess connected with a deciduous tooth not unfrequently results in necrosis of the surrounding bone, involving oftentimes the loss of the germs of several permanent teeth. The following case illustrates this point :

Johnnie F., of Irish parentage, and serofulous diathesis, about five years of age, was brought to me by his mother, who desired the extraction of the right inferior second molar to relieve pain, which he referred to that tooth. Examination showed the surrounding parts congested and highly offensive, but the tooth complained of was so slightly attacked by caries as to show at a glance that it was not the cause of the trouble. Traction upon it however, showed it, and a portion of the adjoining bone, quite loose and free from the maxilla. After making a slight incision I was able to gently lift out the exfoliated portion (which I pass around for your inspection). It will be observed that the germs of the permanent bicuspids are in the sequestrum, but on examination of the boy's mouth at the present time (it being now about seven years since I first saw him), shows the permanent canine also missing, the germ of which occupied the space where the most acute inflammation seems to have been. Owing to ignorance of the mother the history of the case is rather meager, she not being aware of any trouble until a day or two before consulting me. I am inclined to think, however, that the trouble resulted from a blow which the boy said he received about a year before. The only after-treatment required was thorough cleansing with earbolized water—the parts healing generally.

The whole of the time allotted to me for this essay could to advantage be used on this question alone, but I will tax your patience only long enough to again ask that you use your influence in trying to impress upon parents the necessity of having these teeth carefully and frequently examined by a competent practitioner, for more can be done to *avoid* impairment of the teeth before the age of twelve than at any other time.

While speaking of children, I will simply call your attention to a deformity of the oral and nasal cavities and the adjacent bones, which often seriously impairs mastication and speech, and occasions difficulty in nasal breathing, with its attendant ills. In this deformity, which is produced by the habit in the infant of thumb-sucking*, there is a forward and upward projection of the superior maxilla, accompanied by a fan-like projection of the teeth and upper lips. The bones of the floor of the nares are elongated, narrowing the nasal cavity, and generally there is a lateral deviation of the bridge and septum of



the nose which causes stenosis, from the thickening of the tissues. In the lower jaw a reversed deformity often exists which deranges the proper articulation of the teeth, interfering with mastication, and consequently impairs digestion. The practice of lip, finger, or tongue-sucking may be reckoned under this head, and can cause considerable deformity at an age when the parts are so easily moved and moulded, and whenever any of these pernicious habits have been formed in children, no pains should be spared to break them up. This habit, apparently so innocent, is often encouraged by those ignorant of the consequences as the peace and quiet given to parents while irritable infants are so engaged is considered especially desirable.

Although a habit hard to correct, even in quite young children, and one which waxes stronger with increased years, to break it up is easier than to remedy the resulting deformity. A night-dress without sleeves, fitting tightly about the neck inside of which the arms can move at will, is one good mode of treatment. A very interesting article on this subject will be found in the *Boston Medical and Surgical Journal*, 1878, by T. H. Chandler, D.M.D.

Physicians and dentists have long observed that during pregnancy the teeth of females are particularly prone to decay. While

* Through the kindness of Norman W. Kingsley, M.D.S., D.D.S., I am allowed the use of this figure (from his work on "Oral Deformities"), which shows a deformity resulting from thumb-sucking.

I have never met with any theory as to the cause of such increase, I am inclined to the opinion that to the abnormal condition of the female pelvic organs, acting through the digestion, together with a vitiated condition of the oral fluids at this time, is due this result.

The same is true, to a great extent, of females suffering from uterine diseases. When such a condition exists, whatever the causes, the treatment should be of a temporary nature, so as to lessen the strain on the nervous system of the patient, and because so-called permanent operations will, while the same predisposing causes exist to produce caries, be found soon to fail. Gutta percha or oxyphosphate of zinc fillings will be found in such cases to outlast any metallic stoppings.

Having often been consulted by medical men as to the advisability of extracting teeth from the mouths of pregnant women, a few words here, on this topic, may not be out of place. While the extraction of a tooth is an operation of common occurrence, it should not be considered as trifling, for it produces invariably a sudden nervous impression—*shock*.

There is a rupture of from one to three square inches of living tissue, containing blood-vessels, and from one to four nerves, while often there is more or less extensive fracture of the bony processes and profuse hemorrhage; and in the case of a pregnant woman, all these things should be borne in mind, together with her previous history and condition.

That which may be endured with impunity by the nervous system at one time, may at another be attended by serious injury and prostration. The condition of the tooth also should be taken into consideration, as to its amenability to temporary treatment for allaying pain incident to it, also to the amount of force required in its extraction, and the consequent shock.

Where a choice has to be made between allowing the tooth to remain, involving odontalgia, severe neuralgia, antral or alveolar abscess, (conditions compromising the general health and comfort of the patient), and the removal of the offender, the latter course I should think the proper one to follow, but this contingency can usually be avoided, and does not often arise. It should be a choice between two evils, and especial care should be used to avoid, as far as possible, all nervous impressions. When extraction must be resorted to, I should advise the use of an anæsthetic, preferably

nitrous oxide, there being less danger attending its administration, and because its effects so quickly pass away; and furthermore the operation had better be performed at the home of the patient, especially if she be in delicate health, so as to avoid the nervous irritability which is often awakened by seeing the paraphernalia of the extracting room. I should consider it reprehensible to extract teeth at this time to prepare the mouth for an artificial denture, as the operation should only be performed during pregnancy as a last resort.

As the greater danger of miscarriage exists in the earlier months of pregnancy, temporary treatment, if possible, should then be resorted to, if only for a few weeks. Still, where the tooth is not *easily* amenable to treatment, I believe that the shock from extraction would be less likely to do harm than the exhaustion produced by long continued pain.

In ending, I can truly say that I feel honored with my appointment as an essayist for this occasion, an honor which I desire to acknowledge.

ESSAY.

ASPIRATION OF THE CHEST IN PLEURISY.

BY WALTER HAMLIN HOLMES, M.D., WATERBURY.

Much of the old treatment of pleurisy was emphatically heroic; that is, the patient was quite a hero to endure it, though it is difficult to see anything especially heroic in his physician's giving it. To begin with, all sorts of so-called antiphlogistic treatment were used—bleeding, leeches, blisters, cathartics, mercurials, antimonials were pushed to such an excess to cure the disease that the patient too often succumbed to the combined forces of his malady and its treatment. In fact, in very many cases disease was regarded as an entity—something to be vigorously attacked and driven from the system. The old story of the doctor and his club was many times a good mirror of the then existing state of things. The disease and the patient were both supposed to be in a dark room, into which the doctor, with a club in his hands, was admitted. He dealt a blow in the dark, and might be so fortunate as to disable or destroy the disease, or so unlucky as to lay prostrate the patient. Under such treatment pleurisy was rightly regarded as a very serious disease. But, beginning in the early part of this century, the "Numerical School" made discoveries that overturned many of the old notions. Patients were subjected to various methods of treatment, and the results were recorded and numbered—*observationes perpendendæ et numerandæ*. It was found that the mortality and the length of time required for recovery varied considerably among patients treated in different ways, but that they were greatest in the class most actively treated, less in those for whom little or nothing was done, and least in those whose symptoms were treated as they arose, but who did not receive active and specific treatment merely because

they had pleurisy ; so that the more actively the physician tried to kill the disease the more likely he was to destroy his patient.

Many of the fallacies in the endeavors to remove by treatment pleuritic fluid in the pleural cavity arise from considering that the problem is the same as that of removing ascitic fluid from the peritoneal cavity, and is to be solved in the same way, while the important differences in the two conditions are forgotten or ignored. Because cathartics, diaphoretics, or diuretics are so often efficacious in diminishing or entirely removing abdominal dropsy, it by no means follows that they will be of any service in diminishing pleuritic effusion. The pleura becomes inflamed and its absorbing power interfered with ; the balance of the two processes continually going on of secretion of fluid by the healthy pleura and its reabsorption, is lost, and the fluid, now loaded with fibrin and other products of inflammatory action, continues to be poured out, but is not to the same extent absorbed, and so accumulates ; the absorbing surfaces become more or less thickly coated with fibrin ; and after the acute inflammation is over there is left a greater or less amount of fluid enclosed in a sac of comparatively small size, whose walls may reabsorb it, or may be left utterly unable to do so. In dropsy of the peritoneum, on the other hand, the peritoneum is frequently in a nearly healthy condition, as in ascites from hepatic cirrhosis, from valvular heart disease, or from renal disease, and not hindered from absorbing ; the absorbing surface is of great extent ; the fluid is very favorably situated for absorption by the capillaries of the portal vein when depleted by the action of hydragogue cathartics ; and there is constant motion both of the abdominal walls and the bowels, which must be very favorable for absorption, while every one has seen how little motion there is in that side of the chest which contains a pleuritic effusion of any size. In fact the conditions of ascites and pleuritic effusion are so dissimilar that very different means must be used to assist nature in restoring a healthy state of things when she is unable to do it without assistance.

In many cases of acute pleurisy, after the acute attack is over, the effused fluid is absorbed in a reasonable length of time by the pleural membrane, which has not been much coated with fibrin or in any other way deprived of its power of absorbing. In these fortunate cases, of course, no treatment is needed except such as may be required to keep the general health in good condition ; the

fluid is disposed of without our assistance. But in quite a proportion of cases, from one cause or another, the fluid is absorbed either very slowly or not at all, and outside assistance is needed either to greatly shorten the tedious period of convalescence, or perhaps is necessary to save life. In altogether too many cases, effusions that are slowly absorbing, or not absorbing at all, are practically left to take care of themselves, the doctor wishing to be "on the safe side," which means often that he is willing to expose his patient to certain great loss of time, to the risk of lifelong invalidism, or even of death, rather than to take decided and efficient steps for his relief. There are many dangers in allowing pleuritic effusions, particularly large ones, to remain for an indefinite length of time. When a large effusion occupies the pleural cavity the lung is shrunken to a small, almost solid mass at the upper and posterior part of the chest, near the spine; the longer the effusion remains the less likely is the lung to re-expand, partly from adhesions between its surface and the neighboring parts of the chest growing too strong to be broken down or sufficiently stretched to allow of its full expansion, partly from changes taking place in the substance of the lung itself from its long-continued unnatural compression. Even if after existing for a long time a large effusion should be absorbed or otherwise gotten rid of, under these circumstances the chest-wall sinks in, as the lung cannot expand to meet it, and the patient is left deformed, with a shrunken side and with only one lung that is of much use to him, with his powers of resistance to disease and hardship greatly lessened, and his life is probably much shorter than it would have been could he have recovered perfectly. Again, the existence of a large effusion, particularly on the left side, displaces the heart very considerably: when the apex-beat is found near the right nipple, as it often is in large left-sided effusions, the great veins at its base are much bent, sometimes at nearly a right angle, and the current of blood much impeded. If they are so bent for a long time, clots of blood may form in them, which if dislodged from their position, as they may be by a sudden strain or by the heart too suddenly regaining its old position when the fluid is too rapidly removed, pass into the heart as emboli, and in that case are apt to cause instant death if they are large, or if life is preserved may inflict any of the injuries which are now known to be due to emboli. Besides the danger from thrombosis and embol-

ism, a patient with a large effusion, particularly one on the left side, is always in danger of sudden death from other causes not all understood : probably sometimes from sudden stopping of the heart's action when any strain is put upon it. Moreover, the longer an effusion remains the more difficult absorption becomes ; or the parts may become so accustomed to their condition that little or no change takes place, and everything remains *in statu quo*. Another very considerable danger from too long continuance is empyema : in addition to the fibrin in the fluid there is a greater or less number of wandering cells—white blood corpuscles ; in time more and more of them are poured out into the pleural cavity until in time the fluid becomes purulent. After this has taken place the danger to the patient is very much greater, and the difficulty of treatment far greater than in simple pleurisy with serous effusion. In the case of a patient with a tubercular family history, consumption or acute tuberculosis is only too likely to follow pleurisy, and indeed it may be considered that all cases are more or less exposed to this danger ; and the sooner the fluid is gone and the parts restored as nearly as possible to a normal condition, the less risk there is of this sequel. Finally, leaving all of these dangers out of consideration, when there is a very slow absorption of a pleuritic effusion the patient suffers for months or years with anaemia, debility, dyspnoea partly from having a smaller breathing surface, incapacity to work, various aches and pains, and in fact, so far as most useful purposes are concerned, loses just so much time out of his life ; and to shorten the duration of this state of things is certainly to do him a very great service.

The question "How shall the pleural cavity be emptied of its fluid contents?" has been answered in several different ways, and some of the older answers are now thought by some to be no solutions at all. Hydragogue and the milder cathartics often bring about like magic the absorption of ascitic fluid ; but as has been said above the conditions in the chest are very different, and it is illogical and contrary to experience to expect similar results in the two places. Probably very many of the cases in which purgatives and similar drugs have been supposed to bring about rapid absorption of pleuritic fluid were those in which the process would have gone on nearly or quite as quickly without their use. Furthermore, purgatives, unless very mild ones, do positive harm by diminishing the strength of the patient, of which he often has lit-

tle to spare, and unless they do sufficient good to more than counterbalance their damage they should not be used. Diuretics, as a rule, only serve to amuse the patient while nature effects the cure, or while the case remains as it was before. Diaphoretics, as *jaborandi*, the hot air bath, etc., are open to the same charge as cathartics of weakening the patient, while they fail in the very cases where their desired action is most needed. Blisters have great favor in the eyes of some, and often have an excellent effect on the minds of the laity, who suppose that the fluid of the blistered surface is directly drawn from that in the chest; but they are dirty, uncomfortable, interfere very much with physical examination, and probably do little or no good so far as stimulating absorption is concerned. I saw not long ago an unfortunate patient who had had two blisters nine by twelve inches applied, one on each side of his chest, and who could not lie down without resting directly on a blistered surface. Fortunately such practice as this is becoming more and more uncommon. The probabilities are that large blisters directly retard the convalescence of the patient in these cases, and are no more productive of good than the tortures of the Inquisition. Tincture of iodine is largely used to cover the skin, and serves also the purpose of covering ignorance. A very common working rule seems to be "when you don't know what the disease is, or don't know what else to do, paint on tincture of iodine." While it has its uses, applied externally, it is very little, if it is anything more than a very feeble counter-irritant, and its best recommendation is that it can hardly do harm.

In cases where absorption is going on with fair rapidity, the drugs and external applications spoken of above are hardly needed; while in cases where it is going on too slowly, or in which there is urgent need of reducing the amount of fluid, they are of little or no use; and, in some cases, putting with such means when a more efficient one is urgently demanded, is evidence of almost criminal incapacity or laziness. When our patients put their lives in our charge, they have a right to the use of the best methods known to help them that it is in the power of their physician to employ.

Under what circumstances is aspiration beneficial in pleurisy? In the first place, when the amount of effusion is very large, causing flatness on percussion nearly to the clavicle, or over the whole front of the chest, it is indicated; and the necessity of its use is

greater in proportion as the patient is suffering from dyspnoea, semi-suffocative attacks, weak action of the heart, or excessive general loss of strength. In some of these cases of great distension, the necessity of removing some of the fluid is so urgent that quite a number of cases have been reported that, having been seen in one day or evening and aspiration having been determined on for the following day, have died in the intervening night. In these cases, absorption seems to be held in abeyance by the powers of the pleural sac being paralyzed by the great pressure of the fluid on it. A portion of the fluid having been removed, sometimes even a very small amount, it is often astonishing to see how rapidly the remainder is absorbed, though no such process was taking place before. In the second place, aspiration is indicated in cases in which, be the amount of the fluid large or small, it has not for some time diminished in quantity. Frequently, toward the end of the process of absorption, the fluid becomes so thickened by the continual removal of its more liquid constituents, that absorption comes to a standstill. In these cases too, as in the foregoing, nature seems only to need to be started; just as when a stone that has been stopped while rolling down hill may need only a slight push to send it flying to the bottom of the hill. It is impossible to say just how long after the occurrence of pleural effusion we should wait for absorption to begin before we should use the aspirator; but it should certainly be used as soon as, no progress being made, the patient's strength begins to seriously fail, or as soon as he begins to suffer from any of the symptoms above enumerated as due to the presence of fluid. For my part, I should propose aspiration as soon as I was sure that no progress was making or likely to be made for some time, even if there were no alarming symptoms, and I should expect by so doing to save my patient many weeks or months of slow convalescence. Finally, it is generally well to aspirate in that class of more or less feeble patients, who have been "ailing" for some time, and in whose chests on physical examination, one finds fluid, the result of chronic pleurisy, that has been there one knows not how long. It is surprising to see how quickly these patients will recover strength and health after a part of the liquid is removed; not all the iron in the drug store will bring the red color so soon into their lips and cheeks as setting their chests to rights. I have had more than one patient come to me with evident general debility,

not having a suspicion themselves that anything was wrong with their chests, and with not many symptoms calling attention directly to that part, but in whom an examination showed that one pleural cavity was nearly as full of effused fluid as it could hold. In these the safest and most rapidly successful treatment is aspiration.

In performing this little operation it is of the highest importance to attend carefully to each one of its details, and, among other things, to assume that everything about the instrument is out of order until you have practically demonstrated that it works as you wish to have it. To see that everything is right before one begins is easy; but to have to correct an error after the aspiration has begun is often very annoying and exasperating, and sometimes dangerous or fatal to the patient. I have known of more than one case in which the operator, instead of removing fluid, has injected air in considerable quantity into the patient—in one case with fatal results—all because he did not test the action of the instrument beforehand. To begin with, take it for granted that the piston has dried up and is loose, as is often the case; if so, it is easily remedied by hot water and oil. Then, after putting the instrument together, turn the stop-cocks in the proper way and exhaust the air from the bottle and let it stand a short time while the patient is getting ready; if the vacuum remains perfect, it shows that the important joints and connections are air-tight. See that the instrument will work properly by putting the needle in a glass of water, turning on the stop-cocks and seeing whether the water runs freely into the bottle, and that air does not bubble up into the water. Immediately before using, dip the needle into boiling water for a while to disinfect it, having seen before that it is scrupulously clean. Last of all, dip the needle into carbolic oil, be sure that there is a vacuum in the bottle, and all is ready to begin. Some of these precautions may seem trivial, but it is to those who do not observe them that annoying delays and accidents occur during the operation.

As a rule, it is better to have the patient in a sitting posture, and to have the chest warmly covered, except near the place where the puncture is to be made. He should sit in an easy attitude that he can retain as long as the operation lasts; as any considerable motion might break off the needle by changing the relative positions of the muscles, ribs, and scapula. It is unnecessary to make any cut in the skin with a knife before inserting the

needle; this is sometimes done in order to prevent the end of the needle becoming plugged by a little circular piece of skin which might become lodged in it while passing through that structure, but the danger thus guarded against is a theoretical one; while in one of my cases, the husband became so excited and alarmed by the sight of the knife and the small preliminary nick in the skin that he almost succeeded in preventing the remainder of the operation from being performed. It is better to use too large a needle than too small; if there is any reason to think that the fluid is thick and viscid, or contains flocculi of fibrin, a large needle should certainly be selected; while in some situations a small one is safer, in aspirating the chest there is no additional danger whatever in using a large one. There are several places in which the needle may be inserted. I have generally done it just below the lower angle of the scapula in the seventh or eighth intercostal space. Some select the fifth intercostal space at the side, between the axillary lines; it is convenient in finding this space to remember that a line drawn horizontally from the nipple generally crosses the fifth intercostal space in the axillary line. The direction is usually given to keep the needle near the upper margin of the lower rib, to avoid wounding the upper branch of the intercostal artery, which runs in the groove on the lower border of the rib; but this artery is very well protected by the rib, and apparently it would require considerably more ingenuity to injure it with an aspirating needle than to avoid doing so. Frequently, when the tissues are swollen and the ribs are close together, the problem is how to get the needle between the ribs at all, rather than just what part of the space to select. It is not well to be wedded to any particular intercostal space, but one should remember that if the needle is inserted too high that the lung may be wounded—if it is, it is generally a harmless occurrence—or that, as the fluid is removed and the lung descends it will press on the needle and put a stop to the aspiration from that place. If the needle is put in too low, the diaphragm may be wounded where it arches up in the center of the chest if the effusion is small; or, if it is large and the diaphragm has sunk out of the way, as it rises as the load of fluid is removed from it, it presses against the needle as the lung did from above, and prevents any more fluid from coming out. One easily recognizes the feeling of the lung pressing down, or the diaphragm pressing up on the needle, and to a great extent

can avoid them by altering the direction of the needle, without removing it from the puncture. After the needle is inserted and felt to move freely in a cavity, the stop-cock should be turned and the fluid be allowed to run into the exhausted receiver. If, as sometimes happens, no fluid appear, or only a few drops, the needle may be pushed in one or two inches, or withdrawn till its point is only just within the chest, or its tip pressed upward or downward, or to either side, or it may be rotated a little, or the syringe may be worked to increase the vacuum in the bottle. Some one of these expedients rarely fails to set the fluid running; however, if all should fail, the needle should be removed from the chest, a piece of adhesive plaster placed over the puncture, and the needle, or larger one, inserted in a new place. If one is certain of the presence of fluid in the chest, and that the case is fit for aspiration, he should rarely or never fail in removing some of it. The possible reasons why it does not run, are : The needle may be pushed in so far that its point is closed by pressure on something deep in the cavity, or even on the opposite wall ; it may not have been pushed in far enough to reach the fluid ; it may have detached from the chest wall, and pushed in front of itself, a layer of fibrin ; it may be pressed against the lung above, or the diaphragm below ; it may be plugged with a small clot in the fluid ; or, rarely, the contents of the chest may have become semi-solidified or too viscid to run through the needle. To complete the list with some causes of failure that ought not to occur, but have repeatedly occurred in the hands of careless operators: the vacuum in the receiver may have been lost by leakage of air by the side of a loosely-fitted cap or stopper ; the vacuum may not have been made at all ; the tube or needle of the instrument may have been plugged by some substance before the needle was inserted, as by the instrument not having been properly cleaned after the last time it was used ; the stop-cock may be turned the wrong way ; or, finally, the action of the syringe may have been reversed, as in one case I knew of, and air pumped into the patient's chest, instead of fluid withdrawn. As the aspiration goes on, one should not be in too much of a hurry to have the fluid flow rapidly ; as the slower it flows the more can be removed before the patient shows any sign of distress, as the lungs and chest can better adapt themselves to their changed positions when the change takes place slowly. An important detail is to be always

sure to turn off the stop-cock on the tube leading to the chest each time that the receiver is detached to empty it, as otherwise air might be drawn through it into the chest during the patient's acts of inspiration.

A question that has to be decided for itself in each case is how much fluid to withdraw, or in other words, when to stop. This can be answered only relatively, not absolutely. The actual amount may vary according to the circumstances of the case from an ounce or two to a gallon and a half at one sitting. A safe rule is always to stop as soon as the patient begins to complain of a feeling of tightness or tension, or as soon as a short paroxysmal cough begins, both symptoms being caused by the expansion of the shrunken lung. The lung will expand to a certain extent, with no sensation beyond a feeling of relief; but as soon as it has passed a certain point a feeling of distress begins. In the case of very large effusions, large enough to depress the diaphragm, a very considerable amount of fluid—several pints—may be removed before the lung begins to expand at all. If the aspiration be stopped at the first intimation of coughing or distress the patient as a rule will not experience the slightest inconvenience from the operation; but sometimes he will cough and feel uncomfortable about the chest for a few minutes afterwards, as air makes gradually its way into the long-closed air-cells. One must not be deceived or made to stop by a cough perhaps caused by the presence of the needle irritating the tissues, by nervousness, or the ordinary pleuritic cough, which is like what the patient has been having during his sickness. To distinguish these coughs from the one caused by expansion of the lung, close for a short time the stopcock, stopping the flow, and if the cough does not continue, or has not the short, paroxysmal character spoken of above, one may safely proceed. One should also stop if the patient feels faint, and give a little whiskey or other stimulant; if the faintness increases the needle must be removed and the patient allowed to lie down. If there was a large left-sided effusion, and the heart was displaced to the right, during the progress of the removal of the fluid it will return to the left side; and one must be sure that the sharp point of the needle is not in such a place that the heart will impinge against it during its return. It is very interesting to observe with the stethoscope or hand the apex beat, at first perhaps near the right nipple, gradually move towards the left, dis-

appear behind the sternum, and finally reappear on the left side of the bone. When the aspiration is finished a piece of adhesive plaster should be instantly placed over the puncture as the needle is withdrawn, and the patient should lie down for a few hours or till the next day. The instrument should be cleaned immediately, or the fluid may coagulate within it and be difficult to remove. If the remainder of the fluid be large, or be not soon enough absorbed, the operation may be repeated in a week or so, often very materially hastening the progress of recovery. Sometimes in old cases, where a small amount of fluid has remained for a long time without perceptible diminution, only a very small amount, perhaps an ounce or two, can be withdrawn; but the removal even of this small amount often starts up absorption by altering the relations of the parts, etc., and recovery goes on rapidly. In these cases all that Nature needs is to be started, and the rest is easily accomplished.

The principal physical signs of the presence of fluid in the pleural cavity are well known—flatness on percussion, absence of voice, absence of respiration over the fluid. Certain physical signs are however given in most text-books, even those of most recent date, which never had existence except in the imagination of the author. A writer sits at his table detailing the symptoms and signs of a certain disease, and in addition to those he has really observed he writes down others which he reasons must be present; *a priori* signs, deduced from the known conditions, but which he has never observed. One reasons: “The upper surface of liquids contained in an open vessel is level;” and therefore writes: “the upper surface of a pleuritic effusion is horizontal unless the lung is restrained by adhesions, and the line of flatness on percussion is horizontal, and changes according to the position of the body.” Subsequent authors reason the same way, and have moreover the authority of their predecessor to uphold them. But as a matter of fact the line of flatness is not horizontal, unless the effusion is a very large one, reaching to the second or third rib, but is highest in the axilla, thence sloping gradually towards the sternum, and descending by a letter S curve towards the spine. The intercostal spaces do not bulge, unless in very large effusions, and even then the appearances observed are often due more to a general œdema of the tissues of the chest-wall. In some cases, especially in children, but sometimes in adults, the voice and

respiration can be heard over the whole area of a large effusion. Such a case is at first perplexing, but a very valuable help to diagnosis is the very great resistance felt by the percussed finger. If only a pleximeter is used this sign is not observed. This sense of extreme resistance is very characteristic of the presence of fluid. In such cases also the peculiar line developed by percussion as the boundary between flatness and resonance is almost, if not quite, pathognomonic of the presence of fluid in the pleural cavity. Friction murmurs are frequently absent until the volume of fluid is considerably reduced. On inspection and palpation the affected side is seen and felt to be motionless, or to move much less than the healthy one. As has often been stated, chronic pleurisy, even when the effusion fills one side, may not rarely be completely overlooked unless physical means of exploration be used, as sometimes a patient may not complain of cough, and the dyspnoea may be attributed to the often great anaemia that coexists.

Of the cases briefly detailed below the first one is introduced to show what may be the course of a case that needed aspiration, but in which it was not performed. She practically lost two years of her life, being a useless invalid for that space of time, which I think would have been reduced to a few weeks had the fluid been removed.

1. Female. Age 36. Acute pleurisy in November, 1880. Right side. Effusion about to top of fourth rib. No aspiration. At the end of two years there were still signs of a small amount of fluid at base of chest, though some months later it was apparently gone. Had quite a little pain for several months after date of attack, and was unable to do any work for two years.

2. Female. Age 26. Chronic pleurisy right side. When first seen had been sick several weeks, and at date of visit was vomiting frequently and had profuse and exhausting diarrhea. Emaciated and very weak. The next day, July 31, 1881, 3 pints fluid aspirated. In one week was up doing housework, and convalescence was complete and rapid.

3. Male. Age 25. Chronic pleurisy left side. The effusion had been greater, but had remained in *statu quo* for several weeks, patient losing strength and flesh and looking very poorly. Fluid about to lower edge of fourth rib. One and one half pints removed March 3, 1882, after which patient's appetite returned; in 5 days was much improved and in good spirits. Rapid and complete recovery.

4. Male. Age 27. Acute pleurisy on left side one month before seen. Fluid nearly to clavicle, and apex beat near right nipple. Two and two-thirds pints aspirated April 12, 1882, and $1\frac{1}{2}$ pints April 18th. First aspiration interrupted by occurrence of cough. Immediate relief from first aspiration and great relief after second. Had been in bed 5 weeks, constantly growing worse. Up and about house next day after second aspiration. May 13, 1882, still 2 inches of fluid in chest, but has gone to work, and has been able to work ever since. No signs of fluid two months later, when he called at my office.

5. Male. Age 19. Chronic pleurisy left side to clavicle; duration of disease unknown—at least several weeks. May 17, 1883, aspirated 4 pints. Apex beat was near right nipple, but after fluid was removed was heard on left side, but still to right of normal place. May 21, 1883, considerable fluid had been absorbed since aspiration, and patient was gaining strength and was at work shortly afterwards, as I heard.

6. Male. Age 23. Chronic pleurisy left side, full to clavicle; apex beat near right nipple. Patient had great dyspnoea and frequent slight suffocative attacks; "couldn't get his breath." Very anaemic, but was up and about the house and garden. July 11, 1882, 5 pints withdrawn, which caused no discomfort, and physical signs very little different after fluid was withdrawn from what they were before, but less dyspnoea. July 19, 1882, one gallon aspirated—13 pints in all. No discomfort or coughing after second aspiration. In each operation I stopped merely because I felt I had withdrawn enough, and did not wish to incur any risks. Convalescence occupied some weeks, but was complete in the end, and patient is now strong and healthy, and has been so for many months. It was the opinion of the physician who called me in consultation, and of myself, that the patient would have died before long had not relief been afforded by aspiration.

7. Female. Age 18. Chronic pleurisy left side; full to clavicle; apex beat near right nipple. Supposed to have consumption by former attendant physician (an irregular) and friends. Presence of voice and respiratory sounds on auscultation all over fluid. Duration of disease uncertain. Patient weak, anaemic, and emaciated, but up and about house. August 8, 1882, 4 pints removed by aspiration. August 22, 1 pint removed. Patient not seen again for five months, when recovery was complete. Improve-

ment began immediately after operation, and was continuous, and, considering her wretched condition, fairly rapid.

8. Male. Age 28. Small amount of fluid at base of right chest, remaining from a former pleurisy about six months before. Pain over location of fluid and cough. Appetite poor and patient not strong, though doing light work. August 14, 1882, $1\frac{1}{2}$ ounces of fluid aspirated. There was great resistance to entrance of needle. Pain was relieved, appetite and strength regained, and patient reported to be well three weeks afterwards.

9. Female. Age 36. Chronic pleurisy on left side to clavicle, of uncertain duration. March 25, 1883, 5 pints fluid aspirated, which coagulated almost immediately on withdrawal. Patient was in a miserable condition, and slowly failing. Immediate relief after operation, and no fluid detected in chest April 14, 1882. Complete recovery.

10. Male. Age 19. Chronic pleurisy; duration uncertain; fluid to lower angle of scapula. Family history of phthisis. Patient emaciated, anaemic, without appetite, with frequent annoying cough. January 31, 1883, half a pint removed with partial relief. No more could be made to flow. February 24, 1883, another half pint aspirated, with much relief; could draw longer breath. When next seen, two months afterwards, fluid was absent and lungs were healthy; patient strong and at work. In this case, if the fluid had been allowed to remain, phthisis would probably have soon supervened. As it is, he is now well.

11. Female. Age 44. Disease, chronic parenchymatous nephritis. Suffered greatly from dyspnoea, due largely to double hydrothorax. Both sides were aspirated several times, removing from one to three pints from each side. Each time there was great temporary relief from distressing dyspnoea. The patient cared little for the slight pain of the operation, as she experienced so much relief and was enabled to sleep. Life was undoubtedly considerably prolonged.

Many cases occur in the practice of nearly every physician, in which aspiration of the chest would be of the greatest benefit; and there is no doubt that it should be performed far oftener than it is. It is safe; no great skill is required; accidents need not happen if reasonable care is taken; it is frequently needed, and much sickness, suffering, and even death may be averted if every physician were able to determine when it is needed, or is advisable, and would act on his knowledge by performing it promptly, if allowed, whenever he judges he ought to do so.

COMPLICATIONS IN LABOR.

BY F. N. BRAMAN, M.D., NEW LONDON, CONN.

The immortal Harvey, by the bequest of his homestead, caused to be perpetuated a sentiment which should be cherished by every lover of the healing art: "Exhort your fellows to search out and study the secrets of nature by way of experiment, and also for the honor of the profession to continue mutual love and affection among themselves." Trusting that this advice is as binding upon the Fellows of our own Society, as upon the Fellows of Harvey's favorite college, I present the following cases:

During the morning of January 20, 1881, I received a message from Mrs. G., a lady residing about five miles from New London, requesting my presence at her accouchement, which she thought was near at hand. I found that she had fallen in labor; the pains were irregular, but quite severe. On attempting to make an examination I found the funis prolapsed and pulseless. I inquired how long she had been in this condition, and received the following history of the case: She arose at 6 o'clock A. M. to prepare the morning meal; while in the performance of this and other duties about the house, she had from time to time considerable uneasiness and slight pain; being at full term she concluded that she was about to be sick. While in the act of making her bed in anticipation of the event, there came without premonition a very severe pain, the membranes ruptured, and liquor amnii passed from her in a flood, floating the funis into the world and leaving it depending from her as she leaned upon the side of the bed. This was a new experience, though it was her eleventh pregnancy. Continuing my examination, I found the occiput presenting with the posterior or bregmatic fontanel pressing hard against the arch of the pubis; the os was not fully dilated, but dilatable. From this time the pains continued with more regularity and increasing force until 2 P. M., when her pulse began to

flatten, and her nervous system became unsteady. I concluded the best course for me to pursue was to deliver with forceps as speedily as possible; they were applied without difficulty. I made traction, but was unable to deliver or change the position of the head. After two or three unsuccessful attempts with forceps I abandoned the idea for the present, and determined if possible to give my patient rest, and in the interim send for my full set of instruments, anaesthetics, and counsel. The experience of the past four hours had convinced me that this was no ordinary case to deal with, and that my patient would require all the strength she possessed to carry her through delivery. A full dose of Tully's powder was administered, which acted kindly and gave her about two hours sleep, interrupted of course, by the recurrence of pain. At the end of that time the messenger returned with my esteemed friend, Dr. I. G. Porter, but in his haste had forgotten the anaesthetics. At my request Dr. Porter made a thorough examination of the case, at the conclusion of which he advised the reapplication of forceps, suggesting that additional traction might be able to bring down the head. I acted upon this suggestion, but was again thwarted, and became thoroughly convinced that it required a more skillful hand than mine to accomplish delivery with forceps. I invited Dr. Porter to give the patient the benefit of his experience and skill, which he kindly consented to do, but after a most faithful trial was also baffled. Believing that the use of forceps was impracticable, and in consideration of the fact that the child was dead, he advised the perforation of the cranium, which was done, and after applying a powerful pair of craniotomy forceps, again made traction on the head, but with no better result. The manipulations thus far had produced no permanent change in the position of the head. The pains continued, and the uterine contractions seemed to possess a good degree of expulsive force, but the pulse indicated a rapid failure of strength, although she had taken nourishment and stimulants quite freely. Her condition was such that we deemed further effort at delivery by traction upon the head unwarranted and determined to deliver if possible by version, which process craniotomy had made more feasible. I introduced my hand into the vagina, and as I passed my fingers over and in front of the left shoulder they encountered a well marked constriction in the walls of the uterus, which increased as I carried my hand higher up,

until it seemed like a cord drawn around the body of the child at the elbows and securely fastened. After a long continued effort, however, I succeeded in carrying my hand above it and with some difficulty grasped the feet and brought them below the contraction; it required so much strength to hold them in this position that I determined to place a fillet around them so that an assistant could prevent their receding; this being accomplished, Dr. Porter took it in charge, and while he made steady traction upon the feet by means of the cord, I partially withdrew my hand, grasped the head, and pressed firmly backward and upward. By this conjoined manipulation the contraction gradually gave way, and we were rewarded for our persistent efforts by the birth of a very large male child. Hour-glass contractions continued after the birth of the child, so that it was necessary to introduce the hand, overcome them, and remove the placenta.

Notwithstanding the length and severity of the labor, she made complete and rapid recovery.

At 7.30 A. M., May 12, 1881, I was called by Dr. I. G. Porter, in council with Drs. R. A. Manwaring and C. W. Carleton, in the case of a primipara twenty-eight years of age; she was then forty-eight hours in labor; during the night the case gradually assumed an unfavorable aspect, for as the pains increased in strength, the pulse weakened and increased in frequency, while at the same time there was no advancement of the presenting parts. She had taken nourishment, her bowels had moved, and had urinated several times, but had had little if any sleep since labor commenced; and although the cause of the delay was undetermined, it was deemed advisable, if possible, to give her the benefit of rest. With that end in view, one-half grain sulph. morphia was given, to be followed every hour with one-eighth of a grain, until the desired object was accomplished.

At 4 P. M., when the council met the second time, there were indications of improvement; the os was dilatable, with each pain the occiput seemed engaging in the superior strait, and the patient appeared somewhat refreshed, having received three hours sleep. It was decided that Dr. Carleton should remain and relieve Dr. Porter from time to time, as he was becoming very much fatigued with the continuance of the case, and if occasion required, the other members of the council were to be called at any time during the night.

At 2 A. M., of the 13th, Dr. J. G. Stanton and myself were called, and learned that from the time of our last meeting there had been but little change until midnight, when she again began to show signs of nervous irritability and exhaustion, for which bromide of potassa was administered. Dr. Porter made an examination and found that the membranes had ruptured, but that there had been no advancement of the head, and remarked to Dr. Carleton, "We must apply forceps and deliver at once or try and discover the cause of the delay, for the suffering of the past eight hours has accomplished nothing." Ether was at once administered and the forceps applied, but traction and additional traction not only failed in delivering the child, but in changing the position of the head. Version was next in order, and by Dr. Porter's request, Dr. Carleton manipulated; as he carried his fingers over the shoulder of the child, he encountered a circular contraction around its body which seemed like bone, as he expressed it, so hard and unyielding was the band; the funis was pulseless. With great difficulty he succeeded in overcoming the constriction, securing the feet and accomplishing version, delivering the extremities and body of the child but the head remained at the superior strait. This was the condition of the case when Dr. Stanton and myself arrived. Having had success in delivering the after coming head in several difficult cases by a process novel to myself, at least, suggested the same to be tried in this case, which consisted in making traction from the shoulders and anterior rotation of the body by means of a fillet or tunic in connection with external pressure on the head; this plan was adopted. Dr. Porter made traction and rotation upon the body thus secured, Dr. Carleton depressed the lower jaw, while at the same time, with both hands, externally, I made firm down and backward pressure upon the head; with the united effort thus put forth, the head moved readily along the pelvic course; in fact with so much ease that it was delivered almost with a bound. In all probability the retention of the head was due to the contraction of the sacro-pubic diameter by the unusual development and projection forward of the sacro-lumbar articulations. The adherent placenta was removed and the patient made comfortable in bed; the usual remedies to prevent hemorrhage were given, and morphia was administered for the double purpose of quieting the excited nervous system and warding off if possible, peritoneal inflammation, which we had reason

to fear. Nourishment and stimulants were given as often as was deemed prudent, but with all our exertions, she did not rally; peritonitis eventually set in, and she died at 3 P. M., May 14th.

Adding to the record compiled by Dr. Thomas C. Smith* of Washington, D. C., I find that there are thirty-six well authenticated cases now on record, including the case of Geo. M. Haynes, M.D., of Durand, Ill., and the two which I have just given; of this number nine mothers and twenty-eight children were lost. This record is sufficient to give us a just comprehension of the gravity of the complication. In twenty-six cases, some portion of the head presented; with this presentation, the natural inference would be that delivery with forceps was the most feasible, but the record shows that with one exception, forceps failed. The same is true with the blunt hook, etc. I believe version affords the most sure and safe means of delivery in cephalic presentations, especially if we avail ourselves of the benefit of conjoined manipulations. In my first case of version I felt a strong desire to place both hands in the pelvic cavity, so that I could make downward traction on the feet with one hand, and upward pressure on the head with the other. Of course that desire was not gratified, but ripened into the following process, which has proved very satisfactory in my own hands, and if faithfully followed will prove, I trust, useful to all who adopt it. It consists in placing a cord or tape around the child's feet and securing them by a clove hitch; the cord may be any length you choose, but it is always safe to have it long enough to be controlled by an assistant. This fillet is substantially a lengthening of the lower extremities of the child. I believe, in difficult cases, traction upon the cord thus applied, and pressure at the same time upward upon the head, with the hand in the pelvic cavity, is more scientific and safe than to make traction upon the feet alone. After the extremities and body of the child have been delivered, whether it be a case of version or ordinary foot or breech presentation, we may meet with considerable difficulty in delivering the after coming head. In such cases, the fillet or obstetric tunic is of invaluable service; traction and rotation, whether anterior or posterior, should be made from the shoulders. The body of a new born child is always a very slippery and unsatisfactory thing to handle, saying

* American Journal of Obstetrics, Vol. 15, No. 2, page 294; Vol. 15, No. 3, page 696.

nothing of making traction upon it. The fillet, properly applied, gives greater freedom of motion, and the body and extremities of the child thus secured, may be trusted to an assistant, while the physician, with one hand in the vagina, may depress or make traction on the maxillary bones, at the same time make pressure externally upon the head with the other hand, thus facilitating delivery. The manner of applying the fillet is very important, and is as follows: place the tape back of the neck, carry both ends in front of the shoulders under the arms, cross in the center of the back, then forward and cross front of the hips, back and cross the thighs, forward and cross in front of knees, back and cross the center of calves, forward around the ankles and between the feet. Thus secured, the body may be manipulated at will, but all traction will be from the shoulders as the teachings of science direct.

In my own case I was not looking for such a complication; I had never heard of one like it. I thought at the time, chloroform might have been of service, but from the study of cases that have since been collected together, am compelled to believe that it has but little if any effect upon the tonic contraction of the transverse fibers of the uterus, which, in all probability, are the ones involved in this complication. Anodynes and nervines are of service in controlling the irritated nervous condition of the patient, but in relaxing hour-glass contractions have proved inert.

The etiology of ante-partum hour-glass contractions of the uterus is yet to be written; the rarity of the complication accounts in some degree for its meager history, yet every year adds to its record. The obligation resting upon every practitioner of medicine is plain; he owes it to the profession and public that the minute details of every case be noted; there is at the present time no recognized authority in this emergency, no favored method of procedure to overcome this obstruction. The recorded cases which have occurred in the practice of the specialist have been just as unsatisfactory in their termination as those of the general practitioner.

ESSAY.

INEBRIATE AUTOMATISM.—A MEDICO-LEGAL STUDY.

BY T. D. CROTHERS, M.D., SUPERINTENDENT OF WALNUT LODGE,
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By this term I mean a condition of mind seen in inebriates, in which they are totally oblivious to all the surroundings, and have no consciousness of the nature and character of their acts, and yet give no special symptoms that indicate this condition.

It has been termed, the trance state in inebriety; inebriate insanity; inebriate unconsciousness.

The most prominent mental phase is a total blank of memory, coming on suddenly and after an uncertain interval of time, lasting from a few moments to many days, and vanishing like a cloud.

In this interval the patient may act rationally or otherwise, but yet appears to realize all that is about him.

Similar conditions have been described by various authors, particularly where it was associated with epilepsy.

But that this state was distinct from epilepsy, and due to inebriety as a special, sole cause, is a new fact, which I described for the *first time* in a paper read before the American Association for the Cure of Inebriates, in May, 1879, entitled "Cerebral Trance; or. Loss of Consciousness and Memory in Inebriety."

Soon after, the late Dr. Beard of New York took up this subject and reported many striking cases, and discussed their pathology.

These two papers attracted no attention in this country, but in England Dr. Carpenter and Hulings Jackson wrote on cerebral automatism in which this condition was fully recognized, and many older writers were quoted as having mentioned similar conditions, although not having traced them to inebriety.

Dr. Beard's papers and lectures on the trance state in disease explained the phenomena of this state more clearly than anything which has been written before.

In 1881 the Psychological Section of the International Medical Congress took up this subject and discussed some of its medico-legal bearings.

The same year I presented a paper before the New York Medico-Legal Society, entitled "The Trance State in Inebriety, its Medico-Legal Relations," which was published in a pamphlet form with an introduction by Dr. Beard.

This paper has attracted much attention among specialists, both in Europe and this country, and many distinguished physicians have already begun studies in this direction.

I propose to give a general outline of this new field of psychological research, which so far promises to revolutionize the present medico-legal relations of inebriates.

The following facts are fully sustained by clinical evidence and observation:

1st. The automatic or trance state in inebriety is more or less common, and is a mental condition in which all consciousness and recollection of recent events are obliterated, and accompanied with no marked symptoms of this state.

2d. This state indicates profound disturbance of the higher brain centers, and is of necessity followed by impaired judgment and lessened responsibility.

3d. This mental condition is always found associated with a particular neurotic condition, either induced by alcohol, or existing before alcohol was used.

4th. In chronic states of inebriety it is always present in some form or other.

In general terms the pathology of this condition, according to the late Dr. Beard and others, is the arrest of certain brain functions, or the cutting off of nervous activity in one direction and concentrating it in another. Or, cerebral exhaustion, and a lowering of consciousness below the plane of rememberability.

In these cases the late Dr. Beard thought that consciousness exists, but of such a degree that memory does not record it. In other words, the man at the time is conscious of his acts, but memory makes no record of them; hence they are blanks which can never be recalled. A case of a somnambulist mentioned by

the late Dr. Forbes Winslow, is a good illustration: One night this person, while walking in his sleep, found his night dress on fire. With excellent judgment and coolness he threw himself on the bed and extinguished the flames, resumed his walk, and next morning awoke in great wonderment at the appearance of his charred dress. He had no recollection or memory of this event. This was apparently consciousness that was unrememberable. Memory is cut off, and the person is an automaton, acting from unknown motives and impulses.

In the few published cases which have been studied, two conditions have been noted: One, in which persons in this condition pursued a certain accustomed line of thought and action. The other, in which unusual ranges of thought and action, and criminal impulses were prominent. These states can be more clearly illustrated by a brief study of cases, than otherwise.

The first state, where familiar lines of thought and action were followed, is illustrated in the following, recorded by the late Dr. Beard: A physician of eminence, who was a periodical inebriate, after a certain period of drinking, lost all memory and recollection of events and surroundings. From a few hours to several days he would go about his usual work, then wake up, and this past would be a perfect blank, which was never recalled. He gave no evidence to his friends of an unusual condition; to his wife, who watched him narrowly, he seemed more abstract and heavy; did not read or talk about anything outside of his professional work. He attended patients; wrote good prescriptions; and yet, could not recall anything when this blank was over. These blanks have been growing longer and more frequent during the last two years, and are now more noted by his evident anxiety to collect bills, and settle with his patients. He seems to have a strong impulse to adjust accounts with every one; pays bills, gives receipts, and collects money; and yet, never can recall or remember any of these events. While he acts automatically, there is apparent concentration of increased nerve force in the line of business, to settle and adjust accounts.

Dr. Wright of Bellefontaine, Ohio, mentions a case of a clergyman who was accustomed to use spirits before going into the pulpit, and at home in the morning. On many occasions he had no recollection from the time the spirits took effect until next morning, twenty-four hours later. In the meantime he had

preached twice, and conducted a Sunday-school. After a time his mental condition attracted some attention, from the fact that he preached the same sermon over, morning and evening, for two Sundays in succession, and also gave out the same hymn, over and over again. His reply to the inquiry, why he had done so, was, that it was eminently fit and appropriate. His chagrin, after, was very great, and he took pains to have two hymn books properly marked, and all other sermons put away, except the ones he was to use. His real condition was that of alcoholic trance, and not suspected. Nothing was noted but a certain abstractness of manner that was unusual.

Among the cases which I have studied is that of a bookkeeper, who has these blank states of memory, and goes on with his work the same as usual, hours after awaking, and realizing nothing of what has occurred in the meantime. He is a constant inebriate, using a certain amount of spirits every day; never intoxicated, or apparently different in his manner.

In another case, an engineer will attend to all the duties of his engine, and be utterly oblivious to everything about him. He will, apparently, realize all his surroundings and work; and yet, after, have no memory of it.

A prominent politician, while drinking steadily, and more or less to excess, made a tour from Saratoga Springs to Whitehall and back by the way of Lake George, making four speeches, meeting many persons, and appearing fully conscious; and yet, never could recall a single incident of this trip. He acted automatically, doing what he was accustomed to.

In another case, a railroad conductor suffered from these blanks, and during this time went on about his work as before, showing his usual judgment and coolness. His friends noticed a blank mental state when he was alone for a few moments, in which he looked out of the window in a dazed way; also, he made frequent notes during this time of passing events, not common when he was free from these states.

A number of similar cases have been published during the past year, in which this automatic trance state was present, and the patient went about, doing work that was familiar, but was never recorded by memory and the higher brain centers. I think these cases will be found very common among inebriates in all walks of life.

In the second class, in which persons in this state display acts and deeds which are unusual and criminal, the greatest medico-legal interest centers.

Many cases are reported in the criminal courts every day, of inebriates arrested for crime, who positively assert that they have no recollection of any of the circumstances before or after. From their own statements, all is a blank from some point before the crime was committed up to a point after, when arrested or in jail. This defence is not accepted as entitled to any credence, although the crime is without motive and unexplainable, and exceptional to the natural history of such criminal acts.

Some time ago I examined a case which is typical of a large class—a quiet farmer of very retiring disposition, who was never quarrelsome or vindictive, but had used cider brandy for years, until he was greatly enfeebled in both mind and body. One day he seized a wagon stake and killed a stranger who happened to be near. He was arrested, and claimed that he had no recollection of his acts from the time of drinking, an hour before the commission of the crime, to a point several hours later, in jail. In the trial the unusual and extraordinary nature of the crime, and his previous good character was considered, and he was sentenced for life. From a medical examination of his history, it appeared that for two years before he had complained of blanks of memory, and that he had on various occasions done unusual things, such as giving away property to persons who had no claim on his generosity; also, whipping his horses, and showing violence to animals on the farm. On all these occasions he seemed sober and in full possession of his mind, although he talked less, and moved in a mechanical abstract manner. He asserted that he could not recollect any of these events, and his after conduct confirmed this statement. From these and other facts, it was clear that he was thoroughly irresponsible for the crime committed, and was suffering from alcoholic trance at the time of the event.

An eminent judge of Philadelphia has lately published two similar cases, where drinking men, in apparent possession of their faculties, committed crime. One stole a horse and carriage, the other killed a stranger, without provocation or cause. The acts were unusual and without motive, and neither of them had any conception or memory of what they had done. The conclusion reached by the judge was that some unknown form of insanity

was present, differing from all other cases. These were alcoholic trance cases, or inebriate automatons.

A teller in a bank, who drank steadily, forged a note and put the money in his pocket. The next day he was amazed at the presence of the money, not knowing where it came from, and having no use for it. He had no recollection of the circumstances, or reason for the act.

An inebriate, who was always about the same in manner, never stupid or delirious, put fire to his buildings one day, and they burned down. He then offered a large reward to trace out the incendiary. When he was found to be the guilty one great was his amazement. There was no insurance and no motive, and no recollection whatever of any circumstances connected with the event.

In another case of recent occurrence, an inebriate, who had complained frequently of blank states of mind, and who loved his wife dearly, suddenly one day threw her violently down stairs, causing her death. He awoke in great amazement in jail, the next day, and when informed of what had occurred, was profoundly agitated. A few hours later acute mania appeared, which ran its course, leaving him a perfect wreck in mind.

These were clearly trance states, and in the latter case the shock of grief at what he had done permanently destroyed his reason.

Undoubtedly, there may be present a strong element of insanity associated with this trance state in crime; still, not distinct enough to be recognized by court or jury. Epilepsy may appear along this line, and be so mixed up with both insanity and inebriety as to make recognition still more difficult. The practical point to be observed is, that all such cases must be measured by the facts of their own personal history, thoroughly studied and justly understood.

The following case occurred in this vicinity, and is given more minutely, as illustrating this phase of the subject clearly:

— was a manufacturer, forty-nine years old, who had used alcohol freely at meals for five years. His ancestors were inebriates, and he had begun to use spirits from some supposed debility, until he was obliged to continue them every day. He was very affectionate and generous to his wife and family, and never betrayed any anger or displeasure at her conduct. Suddenly, after using more than usual of spirits, he became very passionate and offered violence to his wife; her tears roused him from his condition, and he was

greatly distressed at his conduct, which was unaccountable to him. He consulted physicians, and was treated for months for some brain malady. Then another blank of memory, in which he started the most slanderous stories about his wife staying at a hotel. His conduct was consistent with his stories, and his manner was in no way unusual. On recovery he was again chagrined and did not believe he had said what was represented to him by others. He would return from a long absence on business, and break up parlor furniture in a perfectly cool way, and in two hours after have no knowledge of what had taken place from a certain time. Sometimes he would affirm that he wished to punish his wife for some negligence; she would keep away from him at such times, and after an outburst of anger, in which he would sometimes break up the furniture, all would be quiet again, and the trance state would disappear as suddenly as it came on. The surprise and grief at what had taken place would alarm him, so he would abstain for a few weeks from alcohol. One day he assaulted his wife in the street, and walked into the police office, asking to be arrested for some crime. When he recovered he had no conception of any part of the event. These blanks, always attended by violence to his furniture or his wife, increased, and were not noticeable for any other unusual insane conduct, which he fully justified at the time, and always appeared cool and calculating. When friends called, during these periods, he would reason with great calmness, and be perfectly self-possessed, saying that his head was heavy and he was not well, but would be so next day. He went to Europe, and visited the hot springs with no benefit. Finally he went to an insane asylum, and relapsed there, injuring an attendant, but in a way and manner so perfectly cool and free from excitement that the superintendent thought it evidence of a sane mind, and doubted all his statements, discharging him as malicious. I advised him to go under the special care of a physician, and he is now free from these trances, and has taken no spirits for many months.

The general history of this case is exceedingly suggestive. The inebriety was followed by a distinct trance condition, with an unusual course of action, utterly at variance with his previous character and habits. The suspicion and violence grew into a dangerous impulse. This always followed after an excessive use of alcohol, and was not attended by any symptoms except the

delusion of wrong in his wife, and the desire to right them by violent measures. The passionate violence at these times was of short duration, and the blanks lasted from a few hours to two or more days. His appearance gave no hint of his unconscious condition, and his reasons for violent acts were in a measure sane. He would have committed a fatal assault had a favorable opportunity occurred, and only by the caution of his wife and friends was this avoided. Only a minute study of all the circumstances and history of the case would have indicated the mental instability which was present; and yet, he would have received the full measure of punishment in the hands of any court or jury without such study.

This case illustrates what in all probability takes place every day in this country, especially in the sudden purposeless crime committed by inebriates. These cases fill the newspapers, and astonish both courts and juries, who are puzzled to find a motive for the crime, or to attribute it to insanity as described by the text-books, or defined by experts. Sometimes these cases (where the suspicion of irresponsibility is present) are defended on some strained theory of insanity, whose obscurity confuses the courts, and is criticised and ridiculed by non-experts and lawyers. These cases are not studied intelligently, and the true theory of their condition is unknown. Two cases will illustrate the every-day's experience of courts all over the country. Some man, an inebriate, of low moral nature (which is always an evidence of defective brain organization), comes home, after excess from alcohol, not intoxicated, and in an altercation kills his wife, or some one who may be drawn into the circle accidentally. He is arrested and has no memory of the event, no study is made of his case, only a few facts of the crime come out prominent. If he has money the defence is technically unnatural, and of course fails; he is punished. The second case is one where previous good character, except excess in the use of spirits, is prominent. He commits a homicide or some strange crime, under circumstances that are inadequate to explain or account for it; denies all recollection of it afterward, and the defence must resort to some specious reasoning and theories, or work on the sympathies of the jury. The judge is indignant at what seems to him efforts to defeat justice, and charges strongly against the prisoner; conviction follows. His counsel are sure of some mental defect; and yet, they can not

make it clear to either court or jury. If the crime is of petty character the punishment precipitates him into incurable conditions, and the object of legal measures to prevent and check crime is defeated. The theological notions of the nature and character of inebriety, upon which legal decisions are based, are active causes in developing incurables of this class. One-third of the business of the courts in all our large cities consists of administering what is termed justice to inebriates, but what is literally means which make their recovery more and more impossible. Thus, crime following inebriety and inebriety itself are punished, with no effort to study the causes or reach down to understand the physical conditions present. The result is that both church and state, in their ignorant measures to check inebriety, are not only increasing its growth, but preparing the soil for its more rapid development.

Hundreds of cases may be selected from the records of courts and prisons equally as prominent as these I have presented, all conspicuous for crime committed after and during excess in the use of alcohol; all denying any recollection of the event; and all the circumstances of want of motive and purpose confirming their statements. Yet, in all these cases there has been no medical study to understand the mental condition which would develop into such acts. Assumptions of perfect sanity and capacity to reason clearly have governed the decisions in these cases. As long as the inebriate was not stupid or wildly delirious he is supposed to be fully cognizant of all his acts; it is considered a vice and punishable up to a certain line, and beyond that, a doubt might be entertained. This is the same spirit of superstition which punished witches and believed in demoniacal possessions, ignoring all physical causes, and is clearly outlined in the late charge of an eminent judge, as follows:

“Intoxication from excess of alcohol is no defence for crime, and cannot in any way lessen the measure of responsibility.”

If inebriety is only a voluntary spiritual state, this is good law, probably, but if it is an involuntary physical condition, a reform is demanded in both theory and practice.

I pause at this point to arrange some of the conclusions which stand out prominently from the facts stated. The great obstacle apparent in the medico-legal recognition of this trance state is the confusion of opinion as to the disease of inebriety. It is a

remarkable fact, that notwithstanding the great advances made in the field of mental sciences, and the increasing prominence of inebriety in its effects in every community, the same opinions prevail to-day which were taught centuries ago. Insanity has emerged from the superstitions of religious teachers, but inebriety is still invested with murky theories of vice, sin, and punishment. All studies of its nature and causation have been made from the moral side alone. As a natural result the application of means and measures for the care and control of inebriety, based on such views, have utterly failed. Practically, no other result can be expected until the entire subject is studied from a scientific standpoint, above the dogmas of theologians and reformed inebriates. The world moves, and no measures for the benefit of society or the elevation of the race will succeed, unless founded on the truths of nature, and along the line of its eternal laws. The inebriate, in this trance state, is a mere automaton in motion; either moving along certain fixed lines of conduct, or acting in obedience to unknown forces, which may change or vary any moment. Some governing center has suspended, and all consciousness of time and the relation of events has stopped. Changing thoughts and impulses, the suggestion of a disturbed organ, or the impression of a thought or desire coming from the past, may suddenly concentrate into action, irrespective of consequences. Both subjective and objective states, influenced by conditions of health and brain power, may develop into deeds that are practically unknown and unrecorded by the higher brain centers.

The phenomena of this state divides into two forms. One, probably the most common, in which the mind moves along certain familiar lines of action, and follows some purpose which has been previously fixed, all of which appears natural and reasonable. Second, a new line of thought and action appears, unusual and foreign to his every-day life, often impulsive, inconsistent, and yet seemingly one that he is fully conscious of, and if questioned, may give reasons that seem to justify his conduct.

In both of these forms sudden changes from one state to another may follow. Emotional disturbances may precede this state, or may appear coincidentally with it. The senses are blunted or enfeebled, or they may be intensified in certain directions. Except

this, perhaps, there is little evidence of unconsciousness, and if the impulse is criminal it may appear without premonition, like a flash of light, and disappear as suddenly. Legally, the first question is the inebriety of the patient. On this point the inference will be clear if the person has used alcohol at intervals or continuously to intoxication. The degree of this excess need not be stupor or delirium, but whenever it is marked by changes of intellect, manner, temper, disposition, habits, and character, inebriety is present. Next, the presence of the trance state, which may be shown from the statement of the patient, and all the circumstances of this state, with a history of the case.

First. The statement of the patient that he did not remember the act may be made to shield him from its legal consequences, or save his reputation. The general principle here is that the use of alcohol invariably impairs the memory, and that confusion of mind and disturbed will-power is a pathological result from the same cause; hence there is always a physiological possibility of the correctness of the statement.

Second. The general character of his conduct during this state will bear out his claim of trance. His general abstractness of manner, or his strange, inconsistent actions, unusual in motive and object, united with an apparent recognition of the surroundings, may be taken as evidence.

Third. The range of the mind, and the general vigor and health displayed, will give some indications of the consciousness of his acts in this state. The sudden change from frankness to reserve, or from confidence to suspicion, or the presence of emotional excitement in little things, melancholy or hilarity, the rapid change of the mind from one extreme to another, are also evidences.

Fourth. If crime is committed, or any conduct which perils the good order of the community, a careful study will bring out the evidence of the mental state present.

Lastly, a general history, which will include inheritance, education, mental capacity, and health, will bring out many factors to determine the case. The patient's acts after coming out of the trance state will also determine its presence. He will manifest an indifference and a change of conduct from that noted in this state. An illustrative case recently under my care was that of a dentist who, in this state, was very anxious to make money, although

wealthy, but when this condition passed away all his money schemes were forgotten. In another case a man murdered his wife in a trance state, and went about for hours, not realizing what he had done, or making any effort to escape. From these and other studies the trance state may be reasonably proven to any court or jury. Then comes the question of responsibility. Clinical facts within the observation of any one will indicate unmistakably that in all cases of inebriety there is a defective brain power and general perversion of healthy activity. Also, when inebriety is present, the door is open for many and complex nervous disorders, which often complicate and make the inebriety more uncertain and doubtful. Hence, when inebriety is proven to exist, the responsibility of the patient for his acts is lessened; he is not of sound mind. When the trance state is determined, the actual responsibility or cognizance of right and wrong is suspended, and the patient is a mental waif, without compass or chart. No evidence of premeditation or apparent judgment in his actions can alter this fact. Any course of action marked by this may come from some impression laid up in the past, which, when conscious reason is withdrawn, takes on form and semblance. The real condition of the mind in this state is more or less concealed. Nothing less than a thorough medical study of every case, by competent men, can determine the measure of responsibility. Such a study must be made from a physical point, based on the facts, for nothing can be a greater injustice to both the patient and the community than to condemn and punish without a knowledge of all the conditions and circumstances. The object of the law to protect the rights and interests of individuals is defeated where its enforcement precipitates the victims into more hopeless conditions. Inebriety in any of its forms may be no excuse for crime, in law, but it can never, in any case, be an excuse for punishment which destroys the victim. The time has come to lay aside the legal barbarisms, relating to inebriety, of the past, founded on superstition and ignorance. The border lines of sanity and responsibility in inebriety, as laid down by courts, are unsupported by facts and the teachings of science.

Inebriety in all cases must be regarded as a disease, and the patient forced to use the means for recovery. Like the victim of an infectious disease his personal responsibility is increased, and the community with him are bound to make the treatment a necessity.

The following propositions sum up many of the facts mentioned:

1st. Inebriety must be recognized as a condition of legal irresponsibility to a certain extent, depending on the character and circumstances of the case, and the general mental integrity displayed.

2d. All unusual acts or crime committed by inebriates, either in a state of partial coma or alleged amnesia, which come under legal recognition, should receive thorough study by competent physicians before the legal responsibility can be determined.

3d. When the trance or automatic state is established beyond doubt, he is both legally and practically irresponsible for his acts during this period. And each case should be measured by the facts of its individual history.

4th. Inebriety is a disease requiring physical means in the treatment. Society demands of the patient that he use diligence to recover, and so far as he may neglect this, both himself and community are responsible.

5th. It is the duty of the State to provide asylums and encourage private enterprise to furnish the means and appliances for restoration.

6th. Lastly, standing on this border-land, and looking back at the monstrous injustice and legal crime that is daily committed in the punishment of inebriates, who are practically insane, I am convinced that the time has come for a revolution of sentiment and practice, in which both the inebriate and the community must be held responsible, not alone for his acts, or the consequences of them, but the causes and conditions which have developed in this way; then the victim will be forced to avail himself of every means for prevention, restoration, and recovery.

REMARKS
ON THE
NATURE AND TREATMENT OF VARICOCELE.

BY MORRIS H. HENRY, M.A., M.D., NEW YORK.

I came here to-day by invitation of some of the members of the Society, and I accept, with no small pleasure and satisfaction, the opportunity to make some remarks on the treatment of varicocele and the removal of the redundant scrotum for the purpose of effecting a radical cure. To me it is a source of great satisfaction to present to you the results of my own clinical experience and observations in the treatment of a disease which I regard as equally important to the physician and surgeon. I will not trespass long on your time or patience. I appreciate brevity at these annual gatherings. Beside this I appreciate the value of devotion to practical results—information in a concrete form that can be of service to the many practitioners that attend these annual meetings. To the physician a knowledge of the pathology and clinical characteristics of varicocele is essential because the physical and mental sufferings are frequently so intimately associated in their clinical aspects with other diseases that a differential diagnosis could not be made without a full knowledge of the nature and cause of the disease. To the surgeon a knowledge of the etiology of varicocele is of deep interest, because he is directly consulted with a view to its relief or cure. Strange as it may seem, there are no settled convictions as to the best course of treatment even in severe cases, and many surgeons of good repute have been led to advise mere palliative mechanical contrivances and non-surgical interference. This course has been pursued by many good surgeons, because they feared the results of ligation and obliteration of the veins—the main treatment—in various forms and by different

methods. Experience has shown that in this course of treatment there is serious risk of life—serious risk of atrophy of the testicle—beside risk of phlebitis and failure of any good results from the operation. A good knowledge and keen appreciation of all these facts led Sir Astley Cooper* to advise and perform amputation of the redundant scrotum—a condition of the disease—in its severe forms for the relief and radical cure of the same. He published his own five cases as well as the results of some cases furnished by his colleagues. He regarded them as cured, and they doubtless were cured. There is no reliable evidence to the contrary, in spite of the loose statements of some who have not looked favorably on the operation from want of success in their own methods of operating. There is no doubt many failures have followed the operation in the practice of otherwise skillful surgeons. In the early part of my own professional career I witnessed the operation a number of times, and the coarse manner of the performances, and the failures—the result, as I thought, of a want of proper instruments, and a good appreciation of the pathology of the disease, led me to a more thorough study of the clinical features, and possibilities of effecting a radical cure by this method.

I was satisfied that the rationale of the operation was a good one, and that success depended on the instruments and method of operating. I invented the clamp—somewhat different from the one I now present to you; this is an improvement on the one I first used, and with this instrument I was master of the operation. I had complete control over any possibility of hemorrhage, perfect control of all the tissues, and perfect ease and security in the performance of the operation. The details I will give you further on. I published my first three cases in 1871, and waited ten years—until 1881—to watch the results. In April, 1881, I read the results of fifteen successful cases before the New York Academy of Medicine, and shortly after before the Academy of Surgery of Philadelphia. I waited for ten years to see the results of the operation, and in all the cases I had an opportunity of following the conditions were perfectly satisfactory. This experience set at rest the assertion that it was not permanently curative. If the operation is done in the manner I shall describe—it requires little more than ordinary skill and judgment to perform it—the result

* Cooper on the Structure and Diseases of the Testis. London, 1841.

must be satisfactory. Such has been my experience, and the same good results have been met by many of my distinguished *confreres*. With my own cases, and of cases in the practice of other surgeons by this method, not less than one hundred and fifty persons have been operated upon, and I have yet to learn of any failures.

Before referring to the pathological features of varicocele, let me detain you by stating what we understand as varicocele: it is a term applied to a morbid dilatation of the spermatic veins. The enlarged veins hang down below the testicle, and reach upward into the inguinal canal, and, when very voluminous, conceal the gland, encroach on the septum, and extend to the other side of the scrotum. The dilatation is not confined to the veins exterior to the gland; those of the organ itself are frequently varicose, and enlarged veins may often be distinctly seen ramifying between the tunica vaginalis and tunica albuginea. In order to appreciate the benefits of and the indications for operation, it is necessary to consider the pathological changes which take place in the various structures composing the spermatic veins and scrotum.

The main changes that take place in the veins are: 1st, the elongation of the vein; 2d, its tortuosity; 3d, the loss of the function of its valvular apparatus; and 4th, the loss of resiliency of the veins, which is of various degrees of intensity. This loss of resiliency is due to certain structural changes which take place in the walls of the vein, consisting of a thickening of their coats by proliferation of their connective tissue elements, following which there occurs fatty degeneration of the muscular elements, which, later on, may increase to complete calcific degeneration.

In taking these changes into consideration it will readily be seen that the various cases met with present phases varying in proportion to the extent of the progress of the pathological changes—namely, those in which there is very little loss of resiliency, in which the varicocele would be slight, and those in which there is an absolute and entire loss, in which case the varicocele would be exceedingly large. As a result of this varicose condition of the veins, greater or less atrophic changes may take place in the testicle. These changes which take place in the veins react on the scrotum, which gradually becomes enfeebled, lengthened, sometimes thinned and redundant. This redundancy, which is probably due to an atony of its dartos muscle, may consist of walls of scrotal tissue of normal thickness, but from clinical observation

I think I am warranted in stating that there is thinning of the scrotal walls in the majority of cases; the intensity of this condition is in direct relation to the extent of the varicosity. It may be well to mention in this connection, that in many cases, particularly where this thinning of the scrotal walls exists, there is frequently a decided enlargement of the superficial scrotal veins.

In some cases, after the veins have attained a certain size, they seem to accommodate themselves, to a great extent, within the distended scrotum, and cause little or no acute pain. Even in these favorable cases, however, acute symptoms may be manifested at any time, and all the distressing and painful features of the most inveterate forms of the disease induced without any seeming or exciting cause.

In the removal of a redundant scrotum in the manner I shall describe, for the relief of varicocele, skill is called for. The success of any delicate surgical operation depends on the care and management before, during, and subsequent to the operation. I have ventured to allude to many little details because I am fully impressed that they bear a most important relation to the chances of success.

Success in any operation depends on attention to details. Failures in so-called minor surgery occur too frequently and are mainly the result of neglect of these so-called trifles. Cases of minor surgery are frequently—by neglect of details—converted into cases of major importance.

DESCRIPTION OF INSTRUMENTS.

The instrument which I have called scrotal forceps, or clamps, consists of two parts. The main part of the instrument has two double-curved blades, made of steel, about ten inches long, sufficiently heavy to give strength and admit of pressure without injury when in contact with the tissues. The handles are large enough to admit of a good grasp without cramping. That part of the instrument below the joint is curved as nearly as possible according to the natural lines of the raphæ, from the upper anterior part of the scrotum down to and under the scrotum, so that it embraces, when placed in front of the scrotum, the entire and exact portion which it is desired to remove. The coapting surfaces are evenly notched to prevent the tissues from slipping, affording a more secure hold on the soft parts, with less pressure and less

injury than smooth surfaces. The blades are only thick enough to give strength, without leaving too much tissue in front.

The handles are so curved that, while they maintain a direct median line they do not interfere or press on the genital parts. The double spring, besides giving additional security and compactness renders them, to a great extent, self-acting, easy of manipulation, and what, at times, may be of very great consequence, ability on the part of the operator to perform the operation without the aid of additional assistance.

The screws in the handle and at the end of the blades afford a complete and perfect hold of the parts to be removed. They are not adjusted until the operator is perfectly satisfied that he has embraced the exact portion to be removed in front of the blades.

In my former operations I made use of an extra blade of steel, nickel-plated, and maintained in the right anterior surface of the clamp by two small pins that fit in grooves cut in the clamp. It is easily inserted with a little pressure, and removed as easily by pressing downward and forward; it is then dislodged by slightly raising the extreme end. The extra blade, when in position, leaves a fenestra to afford the surgeon the facility of inserting all his ligatures, should he prefer it, before dividing the parts. The thickness or amount of the tissue left in front of the main blade and between that and the extra blade, which is the guide for the part to be removed, is ample to assist union, and if the division is a clean one, and the stitches are close and evenly inserted, and tension slight, there is little probability of ulceration through the stitches before union has taken place.

When the part has been removed the extra blade is displaced, leaving a free border exposed in front of the main blade about a quarter of an inch in thickness. In a few minutes the ligatures can be tied and the clamp removed.

For the removal of the redundant portion I prefer scissors to the knife. I am inclined to think the hemorrhage is apt to be less and the cut edges heal more readily by first intention. I cannot give any positive explanation for this, but such is my impression. When the double layers of the scrotum are tightly compressed between the blades of the clamp, it forms a very dense, tough substance, and requires a pair of very strong, sharp scissors to cut through. It is as dense as cartilage. A strong pair of scissors will, with some extra effort, serve the purpose; but, to

insure an easy and clean removal of the part I use a cutting instrument which I have devised and which I call cartilage scissors. These scissors can be grasped and handled with the utmost ease. By the aid of the springs on the inner sides of the handles they are self acting so far as opening the blades. They are curved on the flat side. They are not only useful for this operation, but will, I think, be found to serve better, and are handled with greater facility, than any other scissors, wherever a cutting instrument is needed for cartilage or other dense or thickened tissues.

In my early operations I relied mainly on ordinary sutures as just described. I now use only silver pins with the figure of eight silken thread to retain the skin-tissue edges in immediate contiguity. By the use of the pins the parts are firmly secured—there is no dragging of the edges of the wound—less danger of ulceration of the edges, and a better prospect of union by first intention.

The pins are all inserted through the tissues directly under or close behind the concave surface of the blades of the clamp before the scrotum is removed. In this operation the anterior or convex side of the clamp is the guide for the incision. The detachable guide is not used when the operation is performed in this way. The pins should be inserted with the view of maintaining the divided edges in perfect apposition. In the intervening spaces I use sometimes a fine silk suture—only through the skin—for the purpose of preventing the edges from rolling outward. This obviates the necessity of a large number of pins. As an additional safeguard in preventing the edges from rolling outward, care should be exercised against pressing and tying the edges too closely; gentle apposition, not forcible apposition, is the only way to secure the quickest and best union. I dwell on this point because I have on more than one occasion been asked how to avoid this condition.

I use stout silver pins one inch and a half long. To facilitate the insertion of the pins, and to prevent the small heads from burying in the flesh, if swollen, I cover the heads with a little sealing wax; this also aids in retaining the ligature on the one side of the wound. When the pins have all been inserted, I then fix a small cork on the sharp end of each pin, half the length of the cork. This prevents the edges from spreading wide apart when the clamp is removed. When this is done the scrotum is cut

off and the clamp removed. The silken threads are next placed around each pin as usual in cases of hare lip. The corks are then removed, and the sharp ends of the pins cut off. A strip of thick adhesive plaster is then placed parallel with the line of the wound under the sharp edges of the pins to prevent them from irritating the skin. A simple dressing of cold water—with a few grains of carbolic acid to the ounce—is the only application necessary. The pins should be removed on the third and fourth day. With a little skill they can be removed without causing the patient much pain. The wound should be thoroughly cleansed, the ligatures softened and cut away before any attempt is made to remove the pins. The pins should be gently rotated before withdrawn. The rotation, if gently done, breaks the little attachments formed by incrustation with the tissues, and prevents dragging and tearing of the freshly united parts. These details may seem trifling. They are not; they prevent suffering to the patient, they assist in sustaining the integrity of the wound, and lessen the period of detention and confinement of the patient.

The swelling or œdema which follows the operation invariably subsides in a few days. The treatment following the removal of the pins consists in keeping the wound clean. If there are any points that have not united by first intention, they may be gently stimulated to advance the healing process.

By carrying the incision very low down, to the lowest and most pendulous part of the scrotum, it would afford the easiest egress for any little portion of blood or serum that might collect there, and at the same time prevent, or at least lessen, the chances of an abscess. While I have never met with any such complication, I am nevertheless aware of the possibility of such an occurrence.

Teats, or angular points, if left at the ends of the wound, would prove annoying and unsightly; this may be avoided by a slight rounding of the corners when the part is removed.

It has been suggested that there was danger of a retraction of the dartos muscle in amputation of the scrotum; this I think cannot possibly occur if the forceps are used with ordinary care.

Should any vessel be divided requiring special attention, the application of a small acupressure needle will be found most serviceable. If the bleeding occurs on or very near the border of the incised parts, I apply a *serre-fine* or acupressure needle.

In persons of a feeble or debilitated constitution, diffuse hemor-

rhage may occur, as in any surgical operation. This is best treated by the local application of ice, or of a solution of the persulphate of iron. In persons of a true hemorrhagic diathesis the operation should not be performed.

The theory of the operation is to avoid interference and division of any of the important vessels. With ordinary care, there need be no hemorrhage beyond the loss necessarily following the division of the tissues. The spermatic veins and the enlarged veins of the scrotum proper can be avoided in the incisions by attention to this rule, and to which I believe I first called attention—to hold the parts that are to be removed in front of the light, and be careful that no vessels are included in the integuments beyond the flat convex surface of the clamp and line of division. In the ordinary daylight essential to the performance of any surgical operation, the redundant scrotum will be found perfectly transparent.

The division of any vessels beyond the small and superficial scrotal vessels must be the result of carelessness or want of appreciation of the essential details of the operation. Regarding the amount of scrotum to be removed, I can only say that I take away all beyond that absolutely necessary to form a tight, well fitting covering to hold and retain the testicles in a normal and comfortable position. There is no danger whatever of removing too much in this operation if the clamp is properly applied, and average skill and judgment exercised. In the absence of sufficient skill and judgment there is more probability of a second operation being called for to remove more tissue.

To one who has had no experience—on first witnessing the operation—it seems as if too much were removed, but there is still left some little tendency to a little further relaxation of the scrotum. With the recovery and renewed resiliency of the spermatic veins—by shortening of their axes and less dependent condition there is less strain, and with this lessened strain, increased by relief from the superincumbent weight of blood in the vessels, and increased tonicities of the scrotal integument, there is little probability of more relaxation of the scrotum than can be tolerated with perfect comfort.

At the suggestion of my friend, Dr. Porter, of Bridgeport, I call your attention to the fact that in three of the cases of varicocele treated in the last two years there was a complication of hydrocele. In two of the cases the hydrocele had been tapped

and the parts filled again. Before performing amputation of the scrotum I emptied the sacs in the usual manner. So far, there has been no return of the hydrocele. The operation must prove a radical cure in all cases of extensive hydrocele.

In submitting these remarks to the Secretary, for publication in the Transactions, by invitation of the Society, in addition to my thanks for the courtesies and attention accorded me, I desire, also, to express the satisfaction I feel at the remarks of the distinguished Secretary who suggested a valuable addenda in his recital of two cases of varicocele operated upon by Dr. Jarvis and himself in this vicinity, by the method I have described, and both terminating successfully.

OBITUARIES.

GEORGE BENJAMIN HAWLEY, M.D., HARTFORD.

BY P. M. HASTINGS, M.D., OF HARTFORD.

George Benjamin Hawley, M.D., was born in Bridgeport, Conn., February 13, 1812, and died at the Hartford Hospital, April 18, 1833.

While an infant, his parents removed to Watertown in this State, and here the subject of this sketch passed his early life.

After attending school in Goshen, in 1829, he entered Yale College, graduating in the class of 1833.

Soon after leaving college he commenced the study of medicine with Dr. Pierson of Windsor, and attended lectures during the terms of 1833, '34, and '35, in the Medical Department of Yale College, acting as assistant demonstrator for Dr. J. Knight, a portion of this period. After attaining his degree, he commenced the practice of medicine in Charlton, Mass. In 1836 he became assistant to Dr. Silas Fuller, then Superintendent of the Retreat for the Insane in this city. After serving in this position about four years, in 1840 he commenced general practice in this city. In 1840 Dr. Hawley was married to Miss Zerviah C. Fuller, daughter of Silas Fuller, M.D. Mrs. Hawley died in 1847, leaving one son, George F. Hawley, M.D.

In 1848 he was married the second time to Miss Sarah C. Boardman, of Hartford, who survives him. An only son by this union died in early life.

During the extreme heat of the summer of 1870, and when unusually active in his practice, the first indications of failing health were noticed by the Doctor; failure of the digestive functions and irregularity of the heart's action, soon followed by protrusion of the eyes, led him to the diagnosis of exophthalmic goitre, although there was no enlargement of the thyroid gland.

The remaining thirteen years were years of great activity.

While not wholly relinquishing practice, he became interested in several projects outside of his profession. Some of these matters occupied largely his thoughts during the last months of his life.

Dr. Hawley's character was very marked. His perceptive faculties were prominent, leading him to form rapid judgments of men and affairs; untiring energy, intense persistency in the pursuit of any point which seemed desirable, and wonderful hopefulness, or rather confident belief of success in all his efforts. Failure, I think, never convinced him of mistake. He evidently believed that by persistency he could surmount any obstacle.

A friend of his boyhood states, that fifty or sixty years after, the Doctor, referring to his unsuccessful efforts to capture birds by placing salt upon their tails, expressed his confidence in this method, attributing his failure to the lack of persistent effort. Young Hawley was always ready to invite contest with his companions, which called for the exhibition of physical strength and pluck, and was generally successful.

A classmate in college writes that "Hawley came rather scantily prepared, but he had ambition, industry, and energy, which told in his career. We were to have our semi-centennial meeting this summer, when we shall find our number lessened by more than one-half."

A medical friend, long associated with Dr. Hawley, furnishes the following kind and just appreciation of his character and life as a professional man:

"It was in the autumn of 1835 when I first saw Dr. Hawley. He was one of the dissectors for Dr. Knight, and as he stepped into his seat in the theater, near the door, he drew my attention by the decided marks of resolute determination impressed upon his countenance. An acquaintance was soon formed, which was continued in very close intimacy and friendship until his death. I knew him well and he knew me equally well. We were differently constituted in many things, and did not always think alike, but we never allowed our different opinions to affect our respect for one another. He was ambitious for success, and worked hard for it, harder than most men would have done, and harder than was necessary, for he had not the tact or ready talent of doing things easily, or quietly; or perhaps that delicate and patient sense of letting them sometimes take care of themselves. For, as he was very positive in his ways and measures, throwing into them

all his strength and energy, so he undertook to accomplish by his great and demonstrative resolution, and did usually accomplish it, much which a more undecided man, and one more willing to wait for results, would have left to time, or the natural result of causes. What he did, he did with power. I well remember him in the flush of his practice, and in the exuberance of his robust health. No fatigues could tire him, no opposition or failures discourage him. By night and by day he was almost constantly employed, getting his sleep often by little snatches, not unfrequently upon the floor, or upon the very bed of the lying-in patient. His iron constitution seemed to suffer no injury, at the time, from this abuse, and he was as active, and ready, and resolute, and confident as any man I ever saw. He often told me how strong his appetite was, and what he could accomplish when he was eating freely. Of all physicians whom I have known, he was the most laborious, and would visit the greatest number of patients in the shortest time. Of this slight attention I sometimes spoke to him, saying that he did not fairly give them sufficient attention, but he was always ready with the satisfactory reply, that he did not neglect them, and once having investigated their cases thoroughly, he could perceive the natural course of the disease, but would not either overlook or be unmindful of unexpected or sudden changes. And he had that power which is of the utmost value, and is not given to every man, of taking in a case at once, looking at it clean down to the bottom, comprehending it from its beginning, and judging it pretty accurately along its course, and to its ending. With like intuition, he judged of the proper remedies, and was not unsparing either in their variety, or ample doses. He believed in the efficacy of remedies and of their vigorous application in disease. His active, ardent temperament, would brook no dalliance, or half-way measures, in any department of his profession. With what wonderful resolution have I seen him attack some of the most difficult cases in midwifery, and exhibit an amount of muscular power which would almost indicate a personal struggle; difficulties and dangers only made him more resolute. A man of more patience, and more dexterity, would have accomplished as much with more ease to himself by a greater sacrifice of time. But this sacrifice of time was just the thing our friend did not wish to make.

“Dr. Hawley was not a great reader of medical books or peri-

odicals. He neither had the time, nor was he fitted for it; his habits were too active for quiet study. But he did read, so as to keep pretty well posted as to the advances in his profession, and what he did not learn from books, he acquired from observation. His perceptions were quick, and he took in readily whatever he saw or heard, sifted it quickly but thoroughly, and whatever there was of good in it, made useful."

Prominent as a physician, for a period of more than forty years, as was Dr. Hawley, his name will be associated with one of the most conspicuous charitable institutions of our city, long after the memory of his professional life has passed away. In the origin and successful establishment of the Hartford Hospital, he was, for nearly thirty years, most active and efficient.

A "Home for the Sick," had been maintained for several years in the city, by the exertions of a few benevolent persons, the late Dr. Wilson being especially active. In 1854, Dr. Hawley became interested in the matter of providing for the sick, and largely by his efforts an act of incorporation and a conditional grant of money was passed by the Legislature of this State, for the establishment of a hospital. From this time until his death, this institution was first in his thoughts, and absorbed a large share of his attention and energy. From the beginning he was confident of success and labored incessantly with his whole power to this end. Never discouraged by the rebuffs or lukewarmness of those to whom he applied for aid, he was ever ready to present the claims of this charity and urge with great earnestness their recognition. Difficulties seemed to have only quickened his zeal and made him more resolute. Looking over his annual reports from 1855 to 1883, one cannot fail to admire the skill and tact exhibited in pressing the claims of the hospital upon public attention, setting forth the need of its existence, and want of funds for its continued prosperity.

Commencing with little knowledge of hospital structures and management, it must be admitted that Dr. Hawley exhibited wonderful acuteness and sound judgment in the construction and government of the Hartford Hospital, as we find it to-day. That he committed mistakes was unavoidable; but it is remarkable that he escaped so many blunders that usually fall to the lot of inexperience.

The internal management of the hospital was the study of

years; and almost his last work, when confined to his room, was the revision of the rules of government.

It may be, and probably was true, that a vast amount of unnecessary labor and energy was expended upon this enterprise, that more quiet methods and less waste of mental and physical force might have accomplished the same results; but, with Dr. Hawley's vast resources, greater or less expenditure, was not to be considered. If he was to work at all, it was his nature to work with all his power, and no abatement was to be noticed, even if the object to be gained was comparatively unimportant. It may well be questioned whether any man with less force could, under the circumstances, have brought this enterprise to so successful a termination.

A few years since the need of a home for old people of respectability presented itself to his mind, and with his usual diligence, he set about procuring funds for this purpose. The beautiful structure in the vicinity of the hospital, now awaiting completion and endowment, is a monument of his exertions. His often expressed regret, that he was unable to carry out his plans for the permanent endowment of this institution, never lessened his faith in its ultimate success.

For several years the Doctor was engaged in the study and treatment of inebriety, and made vigorous and for a time successful efforts to establish an asylum at Walnut Hill. By his influence a favorable act of incorporation was passed, and a considerable amount of money was contributed to this object. Unforeseen obstacles arose, and the enterprise was abandoned by all except Dr. Hawley. He entertained a confident belief in his ability to found a model reformatory for the inebriate until a short time before his death.

As was natural, Dr. Hawley often incurred the charge of being actuated by selfish motives, and of profiting personally by his remarkable successes. To many minds the display of so much energy and zeal could only be accounted for in this manner. But those who knew him intimately never entertained a suspicion of his honesty and integrity. His administration of the hospital was noted for its broad philanthropy and benevolence, and displayed a sincere desire to benefit his fellow-men. In view of his great achievements we may sincerely forget his faults, and cherish the memory of his many virtues.

WILLIAM H. TREMAINE, M.D., HARTFORD.

Dr. W. H. Tremaine was born in South Lee, Mass., August 26, 1815. He studied with Dr. McAllister of Stockbridge, and graduated at the Berkshire Medical College in 1838. After practicing medicine for about two years in Broad Brook, and four years in New Marlborough, Mass., and ten or twelve in Higganum, he removed to Hartford, where he continued until his death, April 30, 1883. He married Lavinia A. Belknap, of East Windsor, who, with one child, survives him. He was for many years the town physician of Hartford, and also the coroner of the city. He died from cerebral paralysis. A son, Rev. Charles H. B. Tremaine, died the previous year. He was Rector of St. John's Church, New Haven; he was an active, enterprising man, of brilliant talents, and devoted to his calling: and his death was a severe loss to his parents, and to his many friends in the diocese.

FRANCIS TRACY ALLEN, M.D., GRANBY.

BY G. W. EDWARDS, M.D., GRANBY.

Dr. Francis T. Allen was born in Norwich, Conn., May 28, 1803. When three years of age his parents removed with their family to the town of Kinsman, in that part of Ohio then known as the "Western Reserve." Here he attended the common schools, and later was for two years under the tutorship of a Rev. Mr. Coe, of the neighboring town of Vernon. He then, when eighteen years old, began the study of medicine in the office of his brother, Dr. Peter Allen, of Kinsman. Two years later he returned to his native State, and entered the Medical School of Yale College, remaining till 1825, when he received his diploma.

Returning to Kinsman, Ohio, he commenced practice in partnership with his brother. There and in neighboring towns he practiced his profession for nearly thirty years, until 1853. He then removed to Granby, Conn., where he continued in active practice till within a few weeks of his death, which occurred October 8, 1882. He died from a severe attack of asthma and bronchitis.

Dr. Allen was a genial, large-hearted man; in fact, he never

learned to say no, when an appeal was made to his sympathies. While practicing in Ohio he conducted many a poor fugitive through that State on the "underground railroad." Dr. Allen was a life-long and earnest advocate of total abstinence from all alcoholic and other stimulants, and an efficient worker, both in church and Sunday-school. He had a wonderful memory, which faculty he retained to the last.

As a physician he was untiring; his practice was always large, involving much travel and night work. He never refused a call from any source, unless confined to his bed, which was very seldom.

Dr. Allen lost two sons in the war of the rebellion,—one dying in an army hospital, the other soon after the war closed from a disease contracted in the service. About this time he also lost his wife.

One son and three daughters survive him, with several grand and great grandchildren.

GEORGE O. HURLBUT, M.D., GLASTONBURY.

Dr. Hurlbut was born in Glastonbury, Ct., Sept. 28, 1833. He graduated at the New York College of Physicians and Surgeons in 1857, and remained in New York in practice till December, 1861, when he went into the army as Assistant Surgeon of the 1st Conn. Light Battery.

In Jan., 1864, he was promoted to the position of Surgeon of the 1st Conn. Cavalry, and was mustered from the service in August, 1865.

Returning to his home in Glastonbury, he began practice, but was unable to follow it, because of intermittent fever, till the following spring. He was in active practice from then till 1873, when he was obliged to again leave it for about one year, during which time he suffered from an abscess of the liver. From 1874 to the winter of 1878-9, he practiced more or less, when he was attacked with neuralgia, after which he never resumed practice. In March, 1882, he had a severe hemorrhage from the lungs, which continued more or less till the time of his death, Oct. 10th of the same year. Dr. Hurlbut was a man of large intellectual

ability, kind and sociable both in his professional and family relations. He commanded a large country practice during the few years he was able to attend to it. He was noted for the open and hearty welcome he gave to all who chanced to meet him at his home in a social way.

Although he was debarred from practice for many years, he always kept up with the times, both inside and outside of the profession. Dr. Hurlbut never married, his two surviving sisters being the only members of his family.

MARCUS L. FISK, M.D., WAREHOUSE POINT.

BY R. STRICKLAND, M.D., ENFIELD.

Dr. Marcus L. Fisk was born December 16, 1817, at Willington, Tolland County, Connecticut, and died April 2, 1883, of pneumonia, at Warehouse Point, leaving a wife, one son, and one daughter, the son being an Episcopal clergyman located in Philadelphia. Dr. Fisk was the seventh son of Rufus and Irene Fisk, whose family consisted of fourteen children; an honest, industrious farmer, who strove to win from the hard, sterile soil of one of our mountain towns, a sustenance for his numerous family. Thus early Dr. Fisk acquired the habit of industry, which was so marked a characteristic in all his subsequent life. He early manifested a fondness for books, but the absence of public or private libraries in the vicinity of his home, prevented him from fully gratifying his taste. He was educated in the public schools of his own town, and academies of neighboring towns, and taught school several terms, both in Connecticut and Rhode Island.

Dr. Fisk commenced the study of medicine with Dr. Robert Grosvenor of Killingly, and continued under the instruction of Dr. William Grosvenor of Providence, R. I., and Dr. Alden Skinner of Vernon, after which, he became the private pupil of the distinguished surgeon, George McClellan of Philadelphia. He graduated with honor at the Pennsylvania Medical College, March 4, 1842.

In 1867, Dr. Fisk received the honorary degree of M.A. from Trinity College, Hartford.

Soon after graduating, Dr. Fisk commenced the practice of medicine at Broad Brook, in which place he was eminently successful, and in the autumn of 1864, on the death of Dr. Joseph Olmsted, in compliance with the urgent solicitations of the citizens of Warehouse Point, he removed to that place.

Dr. Fisk was a man of extensive reading, of studious habits, a careful and judicious physician, an honest and honorable man. In my relation with him, he was never heard to speak disparagingly of any of his medical brethren.

He was a man of positive convictions, honestly expressed, and when once settled in his own mind, was prepared to maintain them, but never captious, always ready to give a reason for the faith that was in him.

He never turned a deaf ear to the call of the suffering poor, but responded as promptly to their wishes, as to the rich and aristocratic. "To the last, even with death's hand upon him, he toiled to relieve human suffering. Generous, kind, the soul of honor, of irreproachable character, he rests awhile, leaving to those who come after the magnificent heritage of his noble life and pure example."

Early in life he united with the Episcopal Church. He was one of the founders of Grace Church, Broad Brook, and for years vestryman, and was also warden of St. John's Church, Warehouse Point. In the prosperity of the church, he had an abiding interest.

Dr. Fisk was a man of great energy and of more than ordinary ability, commanding at all times the respect of his associates in the profession, beloved in an uncommon degree by those to whom he administered in their hour of affliction and gloom.

We, his medical brethren, have left to us his noble example of sacrifice of self to duty, a character upon which no shadow of a stain can rest. A priceless legacy this, to his children and his children's children.

Then may we not hope, that as the grass grows greener, and the birds sing sweetly o'er his grave, so may his memory grow fresher and more enduring, until that day when we hope to meet him, by the "pure river of the water of life, which flows hard by the city of our God."

MASON MANNING, M.D., MYSTIC.

BY E. FRANK COATES, M.D., OF MYSTIC BRIDGE.

"Hezekiah Manning was a farmer of Scotland, Conn., in the colonial days prior to the American Revolution. He was born, passed his life there, and died in 1800, aged 80 years. He was twice married to sisters named Webb, natives of the same locality. He had several children, one of whom, Luther, was born in 1748. Hezekiah was a man of shrewd common sense, had a clear, incisive way of arriving at truth, and a quiet, original way of expressing himself; and they did him good service in his official duties as justice of the peace, in which capacity he served many years, highly esteemed by his constituents.

"Luther Manning became a physician, and was an assistant surgeon in the Continental Army of the Revolution. He was stationed at New London, and was on service there when the town was burned by the British. He married Sarah Smith, and after the Revolution settled at Norwich Town (now Lisbon) in the practice of his profession, and had for those days a large ride. He was often called to consult with the leading physicians of Eastern Connecticut, and was prominently connected with the formation of the County and State Medical Societies. He was selectman, etc., and represented Lisbon in the State Legislature several terms. He was in active practice in his profession until his death, May 7, 1813, at sixty-five, and for many years was a member of the Congregational Church. His children were Olive (Mrs. Abijah Perkins), Luther, Lucius (died young), and Mason." *

Dr. Mason Manning was born in Hanover Society, Lisbon, Conn., then Norwich Town, Aug. 27, 1796, and died at Mystic, Conn., February 10, 1883. He had a common school education, and probably some extra advantages before he commenced the study of medicine with his brother Luther in Scotland, Conn. He remained with him in the study for one or two years, and then entered the office of Dr. Andrew Harris, of Canterbury, Conn., then one of the most distinguished surgeons of the State, and studied with him for nearly one year. After attending one course of medical lectures at Yale College, he was invited by a friend to go to Bethany, Wayne County, Penn., where there were two resi-

* History of New London County.

dent physicians, but both were intemperate. The young man soon received calls, and found himself in active practice. Fevers prevailed, he was successful, and remained there busily engaged until the next course of lectures at Yale, not having a death from fever occur in his practice. He attended his second course of lectures in Yale College, and was graduated in 1818.

After receiving his M.D., he at once entered into a copartnership with his brother Luther, in Scotland, and remained with him two years, when by invitation and advice of friends he went to North Stonington, Milltown, where he remained about nine months, during which time he made many lifelong friends and considerable reputation in the treatment of fevers, not having lost a case.

At this time, and by reason of the death of the physician at Mystic, Conn., he removed to that place, head of Mystic River, where he remained until his death. He shortly after, November 20, 1821, married Miss Fannie, daughter of Dudley and Mary Hovey, of Scotland, by whom he had one son, Francis Mason, now a resident of Mystic Bridge, and President of Mystic River National Bank. A short time after the birth of this child, the mother, as it is stated, took cold, and died, September 23, 1822, from its effects, leaving the son about one month old. The doctor lived a widower until January 26, 1829, when he married Miss Harriet, daughter of John and Harriet Leeds, who still survives him. She has never had a child, but has been a good mother, and the stepson has proved the son of her choice, and now is the solace and consolation of her declining years.

As Mystic was only six miles from Milltown, he retained many of his former patrons after his removal, and soon succeeded in obtaining a successful practice. Though youthful in appearance, quiet and unobtrusive in his manner, he was good-natured, humorous, and enjoyed a good story and a good joke. These genial qualities, with his honor, sympathy, and steadfast devotion to his calling, soon won for him many friends from all classes of society. Having a large and extensive practice, he did not get as much time to consult books as is desirable; but he was a very close observer at the bedside, and had a remarkably retentive memory, which was noteworthy until within a short time of his death. Like Hippocrates, he learned more from what he saw than most others do from practice and books combined. His whole endeavor was for the good of his patients. He was honest, and seemed to

mind but little for his own reputation, and often, in his anxious regard for the patient, would forget some minor points of ethics in consultations. But if the error was brought to his notice, he took it readily to himself, and felt the true sorrow of having wounded a brother. He had confidence in himself so long as he saw the case clearly, and rarely wished for counsel, but was always willing to have it if it was sought. He had the confidence of his patients for skill, and such was his reputation among them that counsel was rarely desired. But when clouds hung around his patient, everything looked discouraging, and he could not see his way clearly, he was sometimes as timid as a child, and felt no confidence in himself, until he had a counselor on whom he could rely; then, with his advice, he would work again with renewed vigor.

The early reputation that he made in the treatment of the continued fevers he was able to maintain during the whole period of his active practice. He was a believer in the mercurial treatment. Calomel, blue pill, and opium were his sheet anchors. He believed the liver generally in fault, and if this was regulated and kept in good condition, the patient generally was safe. Though he often used calomel and blue pill in what would now be considered quite too liberal doses, he understood his remedy so well that he rarely salivated a patient. Of course, he made use of other remedies for other things, and his selections were usually rational and well-directed. He did not excel in diagnosis, though he made few mistakes; but, from his close watching and his remarkable memory, his prognosis was truly good.

He was an early riser, and managed generally to get home to his meals. His rides, which were often long, were usually made on horseback, for the first twenty or more years of his practice. He was often kept out nights, and was greatly exposed to wind and weather, for, if well, he rarely refused a call to rich or poor.*

In 1854 he began to suffer from right supra orbital and trigeminal neuralgia, caused, probably, from long and continued exposure, and his sufferings from pain were at times very severe. He attended to his business when he was able, but could not bear much exposure, and in the winter of 1854 and '55 he went to New

* A story is told that he once asked a laborer, for whom he had done considerable service without being in any way compensated, to cut some wood for him. The man looked at him and said, "I ain't going to cut wood to pay old doctoring bills." The doctor said, "Very well, when you or any of your family are sick, by night or day, rain or shine, send for me, and I'll come." The man went and cut the wood.

York, and for a short time was under the care of Dr. Willard Parker. He was better in warm weather. Cold seemed to affect him unfavorably. So in the winter of 1855 and '56 he went to New Orleans, and was under the care of Dr. Warren Stone of that city. From none of his physicians did he get more than temporary relief. He still attended to his business, when not in pain, until the spring of 1859, when he welcomed Dr. Tribon from Massachusetts as a co-laborer in the village. He then refused laborious practice, especially obstetrics, as much as seemed possible for a man of his genial disposition and desire to please, and Dr. Tribon became very popular before his death, which occurred November 27, 1864, from typhoid fever. Dr. Manning was his attending physician.

Dr. A. W. Nelson succeeded Dr. Tribon soon after his death, and remained in Mystic until his removal to New London in 1866. Dr. Manning was now growing less and less inclined to do any business by reason of the neuralgic pains being greatly aggravated by anxiety, grief, or exposure; he therefore extended a special invitation to Dr. A. T. Chapman, Oct., 1866, after which he did as little as he could and keep his old friends quiet and easy. The last account on his day-book is October, 1867, though he did some business after this date, but the account was kept only in pocket memoranda.

He was a staunch Whig and Republican, though not active in politics, and he never desired public office.

"In 1837 he was elected a director of the Mystic National Bank, a position which he held until released by death, although, because of his feeble health, he was not able for some five years to take any part in the business affairs of the bank. In 1875 he presided for the last time over the annual meeting of the stockholders, and his signature appears for the last time on the bank records in 1877.

"He was converted in 1842, under the labors of Rev. B. C. Phelps, at that time pastor of the Mystic Methodist Church. His early education and preferences were Congregational, but he was a constant attendant and firm supporter of the Mystic Methodist Church, and in 1876 united with said church, and was regarded as one of its oldest and most faithful members. As a Christian he was quiet, retiring, self-distrustful, but always evincing a firm trust in his Saviour, and for years has been surely and silently maturing for the better and immortal life." *

* Mystic Press of February 15, 1883.

“Dr. Manning had been one of the pillars of society in Stonington for many years. The best people gave him their confidence and friendship, and among the worthy citizens of the town none were more esteemed or occupied a higher position in their regards. He was ever modest and unpretentious, yet social and genial, and a man of sterling qualities, upright, honorable, and possessed of great sympathy and kindness of heart for the welfare of all with whom he came in contact, and especially for those in need. Morally he was ever an example of imitation for the rising generation.”*

I had known him intimately for almost forty years, and in the early part of my professional career I formed a sort of fraternal friendship for him, looking to him for fatherly advice and counsel. When others in consultations seemed to seek my ruin (which I am sorry to say was not unfrequently the case), and danger threatened my reputation in consequence, I would call Dr. M. to the case, and his opinion and advice was sure to put dishonest men to shame, for

“None knew but to love him,
None named him but to praise.”

And now he has gone to the grave in a full age, and like a shock of corn, fully ripe, he was ready for the harvest.

BRADFORD SMITH THOMPSON, M.D., SALISBURY, CONN.

Bradford Smith Thompson, the son of Leonard and Abby Thompson, was born in Thompson, Conn., June 13, 1832. He was educated at Woodstock and West Killingly Academies, and studied medicine with Drs. Post and Wood of New York.

He graduated at the University Medical College in 1861, and at Bellevue Medical College in 1867, and received the Honorary Degree of A.M. from Yale College in 1872.

He served in the army as Assistant Surgeon for three years, practicing in New York after the war was over, until 1873, when he removed to Salisbury, Ct., where he resided until his death.

He was at one time assistant editor of the *Medical Record*, and was a frequent contributor to that and other journals.

* History of New London County.

He was a member of our county, State, and National Societies, the New York Academy of Medicine, the New York Pathological Society, etc., etc.

Doctor Thompson was very genial and affable in manner, courteous to all, a thorough gentleman. As a practitioner he was attentive and successful, beloved by a large circle of patrons.

He left his home in November, 1882, for New York, expecting to return the following day, and after wandering about for two months, was found dead in his bed in Cincinnati, O., January 1, 1883.

He is supposed to have been suffering from mental aberration, caused by financial troubles, and had ended his own life by morphine.

GARRY H. MINOR, M.D., MORRIS.

BY C. H. GILBERT, M.D., MORRIS.

Dr. Garry H. Minor died December 9, 1882, at the residence of Mr. Mason in Morris, after an illness of a few days. On November 30, 1882, Thanksgiving day, he was missed at his usual dinner hour, but nothing was thought of it at his boarding place, as he had previously complained of having a restless night, and was supposed to be making up for lost sleep. On investigation of the premises some hours afterward he was found near his barn just getting out of a snow-drift, where he had lain some four or five hours in a comatose state. His hands and nose both badly frozen, and he was totally deprived of their use afterward. He died December 9th; was buried in Woodbury the 10th inst.

Dr. Minor was born in Woodbury in 1802, studied in New Haven and graduated at Yale in 1824. He commenced the practice of medicine in Morris in 1824, and continued to practice there until his death, although for the past few years his health was such as to keep him in nights, and for the last year was seldom seen on his accustomed ride. He was always to be found at his office, with a pleasant word for those who called.

The Doctor was interested in the affairs of the town for a number of years, holding various offices; a staunch Democrat and thoroughly a gentleman of the old school. Although he was almost 80 years of age (only wanting 20 days) he neither wore glasses

nor used a staff. Through benevolence in his way he won the hearts of many of the poorer class of the town, and at his death remembered some of the needy who were struggling to rise in the world.

C. H. GILBERT, M.D., MORRIS.

BY G. C. H. GILBERT, M.D., WESTBROOK.

C. H. Gilbert was born in Portland, Conn., April 15, 1846. Attaining a good education at the private school of Dr. D. Chase, of Middletown, he commenced life in mercantile business, but failed in 1872, and after spending a number of years in traveling, stopping a while in Kansas and California, he came home resolved to study for the medical profession. After attending three courses of lectures at Yale, Vermont University, and New York University, he graduated at the latter in 1880. In the winter of that year he settled in Morris, Litchfield County. By fortunate success in some of his first cases, he soon gained the confidence of the people. His powers of observation of disease, and the therapeutic action of medicine upon it were unusual. "His genial ways and confidence in himself always left his patients feeling better than he found them," is the expression of one of them in a letter to me, received soon after his death. His persistence in attention to his cases (especially chronic) till they were cured, was remarkable. Being elected Fellow of the State Medical Society, he expected to meet his friends in Hartford on the day he was carried to his grave. A peculiar coincidence was in his being chosen essayist, and in selecting himself the subject of Pneumonia. The obituary of Dr. Minor was prepared by him, and was probably the last work of his pen. No one in so short a time can have found a warmer place in the hearts of his patients than he, if one may judge from the contents of many letters received from them since his death. He came home the 15th of May, and on the evening of the 17th, the day before he expected to return, was taken with a severe chill. We both supposed it a malarial chill, and though the pain was severe in the back, it did not locate in the lower lobe of the right lung till morning, when the symptoms of pneumonia became more distinct. The disease steadily increased in severity till the evening of the 21st, when he fell asleep, we trust, in Jesus.

ELIPHALET HUNTINGTON, M.D., WINDHAM.

BY CASPER BARSTOW, M.D., WINDHAM.

Dr. Huntington, son of John and Olive Huntington, was born in Windham, Conn., March 3, 1816.

His early education was such as the common schools of that day furnished. At the age of eighteen he entered the Windham National Bank to learn the banking business; after a time he went to Middletown to continue the business, in which he became quite proficient, being very accurate and showing great business ability.

From there he went to Cleveland, Ohio, where he engaged in the mercantile business for a time, he then returned to Hartford, Conn., where he continued in trade until he began the study of medicine, under the instruction of the late Dr. Webb, of Windham.

He took his first course of lectures at Yale, and graduated at Dartmouth, in 1847.

He began the practice of medicine in Chicopee, Mass., where he remained about five years. He then returned to his native town, but did not engage in practice. He afterwards associated himself with Dr. F. S. Burgess, Moosup, Conn., where he remained several years, until the failing health of his mother and a sister called him home, where he remained the rest of his life. There being no physician here at that time, he soon found himself engaged in a large practice. As a physician he had few superiors in this section, being very careful, and having good judgment he became very successful. His opinion, which he gave only after mature deliberation, was valued by all. In his death, the church of which he was a member and one of the deacons received a great loss. He being as long as his health permitted a constant attendant upon public worship. In its prayer-meetings he was very interesting, being quite gifted in talking and praying.

The last three or four years of his life he complained a good deal, sometimes even more than his patients, but continued to ride until January, 1882, when he was confined to the house several weeks, but as the warm, sunny days of spring came on, he was able to be out some, but took no long rides, as it seemed to hurt his back so much. During the summer, symptoms of Bright's disease made their appearance, and after a few months of suffering, especially the last one of his life, he passed away, December 30th.

At his request a post-mortem was held, there being present Drs. T. M. Hills, Griggs, Cotton, and Barstow.

It revealed nothing of very great importance, except in the kidneys, and an enlarged heart, it weighing twenty-two ounces.

DYER HUGHES, M.D., HAMPTON.

BY CHARLES GARDINER, M.D., HAMPTON.

Dr. Dyer Hughes, the oldest son of Dyer Hughes and Betsey (Durkee) Hughes, was born in Hampton, Nov. 12, 1797. He attended the common schools of his native town, and without other preparation began the study of medicine, under Dr. John Brewster of Hampton. He continued his studies with Dr. W. A. Brewster.

In 1819, he married Anna Kimball of Hampton, who bore him one child, a daughter. This child was born Feb. 7, 1845, and died Nov. 13, 1856.

He practiced one or two years on his own account, and then formed a partnership, in 1820, with Dr. Chas. Moulton, of Hampton. According to the terms of the contract they were to share the expenses equally. Of the profits, Dr. Moulton was to receive thirteen-twentieths, and Dr. Hughes, seven-twentieths. At the end of ten years, Dr. Moulton was to retire permanently from practice. Dr. Hughes fulfilled his part of the contract to the letter. For several years before the partnership expired, Dr. Moulton was incapacitated for work. Dr. Hughes was never a robust man, but by care he was able to do a great deal of work, and to practice acceptably to the people of his native town, for nearly sixty years.

He represented Hampton in the Legislature of 1844, and was Judge of Probate, Town Clerk, Treasurer, and Registrar for nearly thirty years. He was a member of the Congregational church for the greater part of his life.

His manner was kind, genial, and sympathetic, but he was a man of positive convictions and much stability of character. By nature he was fitted for the sick room, and excelled in the care of fevers, and other diseases where good nursing is the most important factor in the treatment. He used few remedies, but he understood

them thoroughly, had unbounded faith in them, and wielded them with a skillful hand. He had very little to do with theorizing or experimenting. As a physician and a man, he was honest, faithful, and of undoubted integrity.

His charges were very small, compared to present rates. A casual glance over his books shows such entries as these: Visit and Medicine, \$.17; Visit and Medicine, (six miles drive) \$.75; Visit and Medicine, (ten miles drive) \$.68; Ext. tooth, \$.12; Recording Deeds, \$.17; Credit by horse, at .04 per mile, to Vermont, \$5.00; Obstetrical case, \$3.00. He succeeded in saving a few thousand dollars for his old age. The unpaid accounts on his books amount to \$15,000.00. His wife died May 29, 1874, and in 1875, he married Ann Lyon, of Eastford, who survives him. His mind began to fail rapidly about five years ago, and the last three years of his life he was a most melancholy example of senile dementia. He died March 10, 1882, aged 85. His death was due to pulmonary engorgement.

GILBERT HOWARD PRESTON, M.D., TOLLAND.

By S. G. RISLEY, M.D., ROCKVILLE.

The subject of this obituary was born in Eastford, Connecticut, November 14, 1820. He died in Tolland, May 8, 1883. His parents were Reuben and Lucy Preston.

Dr. Preston, after receiving a common-school education, was for some time a member of the Academy in Woodstock, Conn. He was afterwards engaged in teaching during several terms. He read medicine in the office of Dr. Bradford of Woodstock, also in the office of Dr. Stebbins of Eastford, Conn. He attended one course of medical lectures at the Bowdoin Medical College, Maine, and another course at Castleton, Vt., where he graduated. He commenced the practice of medicine at Westford, Conn., in 1845, and remained there two years. He then settled in Tolland, Conn., and in 1848, he married Miss Sarah Cogswell, daughter of the late Harry Cogswell of Tolland.

For the last three or four years of his life, he gave signs of failing health, foreshadowing the disease which terminated in

death. He had organic disease of the brain, which took on a more active form two or three months before his death, failing rapidly during that period.

Dr. Preston was a man of great force of character. His professional history is proof of this; for thirty-six years he has held the medical practice of Tolland, and extended his ride into all the adjoining towns. No man without extra physical endurance and pluck could perform this amount of work in such a "hill country," to the general satisfaction of his patrons, and fair pecuniary return to himself. He was a man of ready perception and judgment, hence his diagnosis of disease was usually correct, and his prescriptions scientific, and appropriate to the case in hand; and by faithfulness and promptness in his care and attention to his patients, his medical practice was crowned with no ordinary success. Genial, courteous, and kind in his manner, he met every one with a smile and pleasant greeting. His intercourse and business dealings were fair and honorable, claiming what was by right his own, at the same time that he cheerfully granted to others what belonged to them.

Always ready by night and by day to obey the summons of the sick, his duties were severe and wearing, which accounts for his comparatively early breaking down, as he belonged to a long-lived race (his father being yet alive).

He believed in the regular medical organizations of the State. He was clerk of the Tolland County Medical Society during his entire residence in Tolland, carrying the same faithful and energetic work into its affairs that characterized him in all his daily life; so that this society, though small, is not behind in merit by comparison with other county societies. With very few exceptions, he always attended the annual medical conventions of the State, either as Fellow or as visitor, or one interested in the deliberations and papers. In this and in other ways he became extensively acquainted with leading gentlemen of the profession. With a fair medical library, and access to the medical journals of the day, he was well informed in medical literature, and abreast of the profession in modern improvements and practice.

He was appointed during the late war by the Surgeon General as examiner of military men claiming exemption from draft by reason of disability, in which he has a good record.

Dr. Preston's intercourse with the members of the profession

was strictly fair and honorable, whether meeting in convention or by the bedside of the patient in consultation. No undue advantage would be taken of any one, and no taint of charlatanism is in any part of his history. Thus his professional life was eminently educating to the community, creating a desirable field for his successor. As a husband, father, and friend, there could be no superior,—faithful, kind, and self-denying, he created a happy home, and by his thrift and attention to business, has left an example worthy of a grateful memory, whose influence will be felt when his name shall have faded from the tomb-stone which shall mark the place where his body was laid. The lives of the virtuous and the just must have their influence upon the generations that follow. Such a life says to us in no doubtful language:

—“sustained and soothed

By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams.”

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* Over sixty years of age.

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South Britain, N. C. Baldwin.

WALLINGFORD, Nehemiah Banks,* B. E. Harrison,* H. Davis, J. D. McGaughey, C. H. Atwater, Wm. S. Russell.

WATERBURY, G. L. PLATT,* Alfred North, Edward L. Griggs, H. E. Castle, E. W. McDonald, J. J. M. Neville, Walter H. Holmes, Walter L. Barber, C. W. S. Frost, F. P. Esterly, William C. Holmes, F. M. Cannon, Charles H. French, James Ramsey, Charles S. Rodman.

* Over sixty years of age.

† P. O. New Haven.

NEW LONDON COUNTY.

E. C. KINNEY, M.D., of Norwich, President.

A. PECK, M.D., of Norwich, Clerk.

Censors—I. G. PORTER, M.D., L. S. PADDOCK, M.D.

County Reporter—W. H. DUDLEY, M.D., of Norwich.

NEW LONDON, ISAAC G. PORTER,* Robert A. Manwaring,*
A. W. Nelson, F. N. Braman, J.
G. Stanton, A. T. Douglass.

FRANKLIN, ASHBEL WOODWARD.*

GRISWOLD, George H. Jennings.

GROTON, Mystic River, John Gray.

LEBANON, W. P. Barber.

MONTVILLE, William M. Burehard.

MYSTIC, Albert T. Chapman.

MYSTIC BRIDGE, E. Frank Coates,
Frank A. Coates.

NORWICH, Elisha Phinney,* Lewis

S. Paddock, CHAS. M. CARLETON,
Wm. S. C. Perkins, Patriek
Cassidy, E. C. Kinney, S. L.
Spragne, L. B. Almy, A. Peck,
W. H. Mason, E. P. Brewer, W.
H. Dudley, H. P. Smith, Remns
Robinson.

Greenville, William Witter, Julia
La Pierre.

OLD LYME, George W. Harris, E. D.
Griffin.

EAST LYME, Elisha Munger.

STONINGTON, Charles E. Brayton,
George D. Stanton. —35

FAIRFIELD COUNTY.

GEO. L. PORTER, M.D., of Bridgeport, President.

J. J. BERRY, M.D., of South Norwalk, Clerk.

Censors—W. A. LOCKWOOD, M.D., C. H. BILL, M.D., G. F. LEWIS, M.D.

County Reporter—W. A. LOCKWOOD, M.D., of Norwalk.

BRIDGEPORT, BOBERT HUBBARD,
Andrew J. Smith, Augustus
H. Abernethy, Geo. F. Lewis,
Jas. R. Cummings, George L.
Porter, Robert Lauder, Francis J.
Young, Curtis H. Bill, N. E.
Wordin, G. M. Teeple, Chas. W.
Sheffry, F. M. Wilsou, T. F.
Martin, W. H. Bnnnell, F. B.
Downs, B. W. Mnson, Mary J.
Risiug, W. C. Bowers, F. A. Rice,
J. D. Bragg, J. W. Wright, A.
W. Lyons, S. T. DeLaMater, W.
A. DeForest, W. H. Donaldson.

BETHEL, A. E. Barber.

BROOKFIELD, A. L. Williams.*

DANBURY, James Baldwin,* Wm.
C. Bennett, F. P. Clark, A. T.
Clason, William F. Laeey, A. E.
Adams.

DARIEN, Samnel Sands,* R. L.
Bohannan.

MONROE, D. A. Richardsou.

NEW CANAAN, WM. G. BROWN-
SON, Willis Cummings.

Greenfield Hill, M. V. B. Dnnham.
FAIRFIELD, S. M. Garlick.

NORWALK, James G. Gregory, W.
A. Lockwood, Jno. C. Kendall,
Robert Nolan, E. C. Clarke, Geo.
W. Benedict.

South Norwalk, R. L. Higgins, W.
C. Burke, Jr., I. J. Berry.

RIDGEFIELD, O. S. Hickok, Wm. S.
Todd.

READING, M. H. Wakeman.

Southport, C. H. Osborne.

STRATFORD, Edward D. Nooney.

STAMFORD, H. P. Geib, Henry
Hungerford, A. M. Hurlbnrt.

STEPNEY, Seth Hill.

WESTON, F. Gorham.

WESTPORT, George B. Bonton, F.
Powers.

HUNTINGTON, Gould A. Shelton.

Sandy Hook, Wm. C. Wile.

WILTON, S. H. Huntington, A. B.
Gorham. —67

* Over sixty years of age.

WINDHAM COUNTY.

JOHN WITTER, M.D., of Putnam, President.

R. ROBINSON, M.D., of Danielsonville, Clerk.

Censors—S. HUTCHINS, M.D., T. M. HILLS, M.D., LOWELL HOLBROOK, M.D.*County Reporter*—C. J. FOX, M.D., of Willimantic.

ASHFORD, John H. Simmons.*

HAMPTON, C. Gardiner.

KILLINGLY, Ashael E. Darling,
Henry F. Hammond.Danielsonville, Samuel Hutchins,*
R. Robinson, Thomas Graves,
Nathaniel Hibbard.

East Killingly, Edwin A. Hill.

PLAINFIELD, Moosup, William A.
Lewis.Central Village, Chas. H. Rogers,*
E. H. Davis.

POMFRET, Frederick G. Sawtelle.

PUTNAM, H. W. Hough,* John Wit-

ter, John B. Kent, Omer LaRuc,
F. X. Barolet, Warren W. Foster.
THOMPSON, LOWELL HOL-
BROOK, E. T. Morse, H. M.
Bracken.

Grosvenordale, A. A. Latour.

East Woodstock, Frank N. Olin.

West Woodstock, A. S. Leonard.

WINDHAM, Casper Barstow.

Willimantic, Fred. Rogers, T. Mor-
ton Hills, O. B. Griggs, C. J. Fox,
Farnam O. Bennett, John Cotton.

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LITCHFIELD COUNTY.

WILLIS J. BEACH, M.D., of Litchfield, President.

H. E. GATES, M.D., of Litchfield, Vice-President.

J. J. NEWCOMB, M.D., of Litchfield, Clerk.

Censors—J. W. BIDWELL, M.D., L. H. WOOD, M.D., ORLANDO BROWN, M.D.*County Reporter*—J. H. NORTH, M.D., Goshen.LITCHFIELD, H. W. BUEL,* H. E.
Gates, W. J. Beach, J. J. New-
comb.

Northfield, C. L. Blake.

CANAAN, C. W. Camp.

West Cornwall, Edward Sanford.

Gaylordsville, Charles F. Couch.

GOSHEN, J. H. North.

HARWINTON, Terryville, W. S.
Swett.

NEW HARTFORD, Jerry Burwell.

NORFOLK, Wm. W. Welch,* J. H.
Stevens.THOMASTON, Wm. Woodruff,* Ralph
S. Goodwin.

ROXBURY, Myron Downs.*

LAKEVILLE, W. Bissell, R. P.
Knight.

SHARON, William W. Knight.

Wolcottville, T. S. Hanchett, L. H.
Wood.

WARREN, John B. Derrickson.

WASHINGTON, Orlando Brown.

New Preston, R. A. Marcy.

WATERTOWN, W. S. Munger.

WINCHESTER, West Winsted, James
Welch,* John W. Bidwell.WOODBURY, Harmon W. Shove, L.
G. Ketchum.

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* Over sixty years of age.

MIDDLESEX COUNTY.

A. B. WORTHINGTON, M.D., of Middle Haddam, President.

J. FRANK CALEF, M.D., of Cromwell, Clerk.

Censors—S. W. TURNER, M.D., GEO. W. BURKE, M.D., E. B. NYE, M.D.

County Reporter—R. W. MATTHEWSON, M.D., Durham.

MIDDLETOWN, ELISHA B. NYE,* Geo. W. Burke,* Rufus Baker,* F. D. Edgerton, Abraham M. Shew, Jos. W. Alsop, Jr., Daniel A. Cleaveland, Johu Morgan, Jas. Olmstead, Wm. E. Fisher, C. E. Stanley, P. V. Burnet, J. N. Kenister.	DURHAM, R. W. Mathewson.*
CHATHAM, Middle Haddam, Albert B. Worthington.*	ESSEX, Alanson A. Hough,* Charles H. Hubbard.
East Hampton, Albert Field.	HADDAM, Miner C. Hazen, Selden C. Noyes.
CHESTER, Sylvester W. Turner.*	Moodus, Wallace M. Kuowlton.
CROMWELL, Winthrop B. Hallock, J. Francis Calef.	OLD SAYBROOK, J. H. Granniss.
	PORTLAND, C. A. Sears, Cornelius E. Hammond.
	SAYBROOK, Deep River, Edwin Bidwell.*
	WESTEROOK, G. C. H. Gilbert,* T. B. Bloomfield.

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TOLLAND COUNTY.

M. B. BENNETT, M.D., of Coventry, President.

WILLIAM H. CLARK, M.D., of Tolland, Clerk.

Censors—WM. N. CLARK, M.D., S. G. RISLEY, M.D., F. L. SMITH, M.D.

County Reporter—S. G. RISLEY, M.D.

TOLLAND, William H. Clark.	UNION, Wm. Howard.
BOLTON, CHAS. F. SUMNER.*	VERNON, Vernon Depot, A. R. GOODRICH.*
COVENTRY, Maurice B. Bennett.	Rockville, Stephen G. Risley,* Francis L. Dickinson,* Frederick Gilnaek, E. K. Leonard, T. M. Rockwell.
South Coventry, Henry S. Deau, E. P. Flint.	WILLINGTON, Wm. L. Kelsey.
ELLINGTON, J. A. Warren.	
MANSFIELD DEPOT, F. E. Johnson.	
STAFFORD, Wm. N. Clark.*	
Stafford Springs, C. B. Newton, F. L. Smith.	

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* Over sixty years of age.

ALPHABETICAL LIST
OF THE
MEMBERS OF THE CONNECTICUT MEDICAL SOCIETY,

With Date and Place of Graduation, and Post-office Address.

Names.	Place and Date of Graduation.	P. O. Address
Abernethy, Augustus H.,	Yale, 1864,	Bridgeport.
Abrams, A.,	Albany, 1881,	Hartford.
Adams, A. E.,	Coll. Phys. and Surg., 1880,	Danbury.
Allen, H. C.,	Univ. N. Y., 1879,	Broadbrook.
Allen, Hull,	Univ. N. Y., 1821,	Milford.
Alling, W. G.,	Yale, 1870,	New Haven.
Almy, L. B.,	Bellevue, N. Y., 1876,	Norwich.
Alsop, J. W., Jr.,	Univ. N. Y., 1864,	Middletown.
Atwater, C. H.,	Coll. Phys. and Surg., 1871,	Walliugford.
Andrews, Wm. H.,	Bellevue, N. Y., 1873,	Milford.
Avery, Geo. W.,	Yale, 1861,	Hartford.
Axtelle, J. F.,	L. I. Hosp. Coll., 1877,	Hartford.
Ayres, W. O.,	Yale, 1854,	New Haven.
Bacou, Francis,	Yale, 1853,	New Haven.
Bacon, Wm. T.,	Univ. N. Y., 1871,	Hartford.
Baker, Rufus,	Columbia Coll., D. C., 1844,	Middletown.
Baker, Scott R.,	Yale, 1879,	Ansonia.
Baldwin, James,	Yale, 1825,	Daubury.
Baldwin, N. C.,	Yale, 1837,	South Britain.
Banks, Nehemiah,	Yale, 1844,	Walliugford.
Barber, W. L.,	Bellevue, 1873,	Waterbury.
Barber, W. P.,	Dartmouth, N. H., 1870,	Lebanou.
Barber, A. E.,	Berkshire, Mass., 1854,	Bethel.
Barker, J. W.,	Yale, 1860,	Westville.
Barnes, Lewis,	Univ. Buffalo, N. Y., 1851,	Oxford.
Barnett, J. F.,	Yale, 1869,	West Haven.
Barolet, F. X.,	Victoria, Montreal, 1860,	Putnam.
Barrows, A. W.,	Yale, 1841,	Hartford.
Barstow, Caspar,	Burlington, Vt., 1878,	Windham.
Bartlett, W. R.,	Yale, 1871,	New Haven.
Beach, W. J.,	Coll. Phys. and Surg., 1867,	Litchfield.
Beardsley, A.,	Berkshire, 1834,	Birmingham.
Beardsley, G. L.,	Bellevue, N. Y., 1873,	Birmingham.
Beckwith, F. E.,	Coll. Phys. and Surg., 1871,	New Haven.
Beldeu, C. O.,	Coll. Phys. and Surg., 1883,	Litchfield.
Bell, Newton S.,	Burlington, Vt., 1864,	Wiudsor.

Names.	Place and Date of Graduation.	P. O. Address.
Belosa, F.,	Yale, 1872,	New Haven.
Benedict, Geo. W.,	Coll. Phys. and Surg., 1879,	Norwalk.
Bennett, F. O.,	Berkshire, 1859,	Willimantie.
Bennett, M. B.,	Berkshire, 1863,	Coventry.
Bennett, W. C.,	Coll. Phys. and Surg., 1860,	Danbury.
Berry, J. J.,	Univ. N. Y., 1878,	South Norwalk.
Bidwell, Edwin,	Yale, 1847,	Deep River.
Bidwell, John W.,	Berkshire, 1846,	West Winsted.
Bill, Curtis H.,	Univ. N. Y., 1859,	Bridgeport.
Bishop, E. H.,	Yale, 1829,	New Haven.
Bishop, T. H.,	Yale, 1860,	New Haven.
Bissell, E. L.,	Yale, 1860,	New Haven.
Bissell, William,	Yale, 1856,	Lakeville.
Blake, C. L.,	Yale, 1875,	Northfield.
Bloomfield, T. B.,	Coll. Phys. and Surg., 1876,	Westbrook.
Bohaunan, R. L.,	Univ. N. Y., 1874,	Darien.
Bouton, Geo. B.,	Yale, 1856,	Westport.
Bowen, W. C.,	Coll. Phys. and Surg., 1877,	Bridgeport.
Braeken, H. M.,	{ Coll. Phys. and Surg., 1877, } { L. R. C. S., Edinburg, 1879, }	{ Thompson.
Bradstreet, E. T.,	Coll. Phys. and Surg., 1877,	Meriden.
Bradley, W. L.,	Yale, 1864,	New Haven.
Bragg, James D.,	Albany, 1867,	Bridgeport.
Braman, F. N.,	Bellevue, 1866,	New London.
Brandagee, E.,	Yale, 1838,	Berlin.
Brayton, Charles N.,	Coll. Phys. and Surg., 1873,	Stonington.
Brewer, E. P.,	Dartmouth, 1878,	Norwich.
Bromley, Daniel T.,	Yale, 1867,	Hartford.
Bronsou, Henry,	Yale, 1827,	New Haven.
Brown, Francis W.,	Univ. N. Y., 1877,	Woodbury.
Brown, Orlando,	Yale, 1851,	Washington.
Brownson, Wm. G.,	Coll. Phys. and Surg., 1863,	New Canaan.
Buel, Henry W.,	Coll. Phys. and Surg., 1847,	Litchfield.
Buel, Virgil,	L. I. Coll. Hosp., 1871,	Harwinton.
Bugbee, L. F.,	Coll. Phys. and Surg., 1866,	Willimantie.
Bull, J. N.,	Coll. Phys. and Surg., 1878,	Plainville.
Bunee, H. C.,	Yale, 1850,	Glastonbury.
Bunnell, W. H.,	Coll. Phys. and Surg., 1879,	Bridgeport.
Burehard, Wm. M.,	Georgetown, D. C., 1866,	Uncasville.
Burke, Geo. W.,	Yale, 1843,	Middletowu.
Burke, Wm. C., Jr.,	L. I. Coll. Hosp., 1875,	South Norwalk.
Burnap, S. R.,	Coll. Phys. and Surg., 1862,	Windsor Locks.
Burnett, P. V.,	Univ. N. Y., 1876,	Middletown.
Burritt, A. B.,	Yale, 1832,	Southbury.
Burwell, Jerry,	Berkshire, 1839,	New Hartford.
Bush, Geo. M.,	Yale, 1881,	New Haven.
Butler, John S.,	Jefferson, Pa., 1828,	Hartford.
Calef, J. F.,	Yale, 1880,	Cromwell.
Camp, C. W., Jr.,	Univ. N. Y., 1874,	Canaan.
Campbell, Jas., Jr.,	Univ. Vermont, 1871,	Hartford.
Cannon, F. M.,	Univ. N. Y., 1867,	Waterbury.
Carleton, Charles M.,	Harvard, 1861,	Norwich.
Carmalt, W. H.,	Coll. Phys. and Surg., 1861,	New Haven.
Carrington, Charles,	Coll. Phys. and Surg., 1848,	Farmington.
Carrington, Henry A.,	Harvard, 1848,	New Haven.
Cassidy, Patrick,	Univ. Vermont,	Norwich.
Castle, H. E.,	Yale, 1870,	Waterbury.

Name.	Place and Date of Graduation.	P. O. Address.
Chamberlain, C. W.;	Coll. Phys. and Surg., 1871,	Hartford.
Chamberlin, M. N.,	Yale, 1866,	Cheshire.
Chapman, A. F.,	Coll. Phys. and Surg., 1864,	Mystic.
Chapman, S. W.,	Coll. Phys. and Surg., 1869,	New Haven.
Child, E. M.,	Univ. N. Y., 1877,	Meriden.
Childs, Seth L.,	Woodstock, Vt., 1835,	East Hartford.
Churchill, Asa H.,	Yale, 1857,	Meriden.
Clarke, E. C.,	Univ. Vermont, 1860,	Norwalk.
Clark, F. P.,	Coll. Phys. and Surg., 1876,	Danbury.
Clark, William H.,	Univ. N. Y., 1882,	Tolland.
Clark, Wm. N.,	Yale, 1830,	Stafford.
Clason, A. F.,	Univ. N. Y., 1875,	Danbury.
Clary, George,	Yale, 1857,	New Britain.
Cleaveland, D. A.,	Bowdoin, Me., 1856,	Middletown.
Coates, E. F.,	Yale, 1843,	Mystic Bridge.
Coates, Frank A.,	Coll. Phys. and Surg., 1875,	Mystic Bridge.
Coholan, M. J.,	Univ. N. Y., 1865,	New Britain.
Comings, B. N.,	Castleton, Vt., 1845,	New Britain.
Coogan, Joseph A.,	Bellevue, N. Y., 1876,	Hartford.
Cornwall, E. T.,	Coll. Phys. and Surg., 1881,	Cheshire.
Cotton, John,	Harvard,	Willimantic.
Couch, Charles F.,	Berkshire, 1863,	Gaylordsville.
Crary, David,	Castleton, 1834,	Hartford.
Crary, David, Jr.,	Yale, 1869,	Hartford.
Cremin, M. A.,	Coll. Phys. and Surg., 1874,	New Haven.
Cressy, Noah,	Berkshire, 1862,	Hartford.
Crossfield, F. S.,	Bellevue, 1878,	Hartford.
Crothers, T. D.,	Albany, 1865,	Hartford.
Cummings, Jas. R.,	Coll. Phys. and Surg., 1862,	Bridgeport.
Cummings, Willis,	Univ. N. Y., 1882,	New Canaan.
Daggett, David S.,	Yale, 1843,	New Haven.
Darling, A. E.,	Harvard, 1872,	Killingly.
Davis, C. H. S.,	Univ. N. Y., 1865,	Meriden.
Davis, E. H.,	Burlington, N. J., 1872,	Central Village.
Davis, G. P.,	Coll. Phys. and Surg., 1869,	Hartford.
Davis, H.,	Yale, 1855,	Wallingford.
Davison, L. A.,	Univ. N. Y., 1882,	Hartford.
Day, L. T.,	Yale, 1880,	Ansonia.
DeForest, W. A.,	Univ. N. Y., 1869,	Bridgeport.
DeForrest, Wm. B.,	Yale, 1840,	New Haven.
Dean, H. S.,	Jefferson, 1852,	South Coventry.
DeLamater, S. F.,	Albany, 1880,	Bridgeport.
Deming, Ralph,	Yale, 1857,	Sharon.
Derrickson, John B.,	Jefferson, 1850,	Warren.
Dibble, Frederick L.,	Yale, 1858,	New Haven.
Diekinson, F. S.,	Yale, 1840,	Roekville.
Doherty, J. J. S.,	Univ. N. Y., 1874,	New Haven.
Donaldson, W. H.,	Univ. N. Y., 1881,	Bridgeport.
Douglass, A. T.,	Univ. N. Y., 1849,	New London.
Doutteil, Henry,	Yale, 1879,	Meriden.
Downs, F. B.,	Coll. Phys. and Surg., 1878,	Bridgeport.
Downs, Myron,	Yale, 1838,	Roxbury.
Dubois, Henry A.,	Coll. Phys. and Surg., 1830,	New Haven.
Dudley, W. H.,	Univ. N. Y., 1882,	Norwich.
Dunham, M. V. B.,	Harvard, 1867,	Greenfield Hill.
Dwyer, John,	Univ. N. Y., 1871,	Hartford.

Name.	Place and Date of Graduation.	P. O. Address.
Eberg, Arnold,	Dartmouth, 1879,	Simsbury.
Edgerton, Francis D.,	Coll. Phys. and Surg., 1864,	Middletown.
Edwards, G. W.,	Univ. N. Y., 1862,	Granby.
Eggleston, J. D.,	Coll. Phys. and Surg., 1879,	Meriden.
Elliot, Gustave,	Coll. Phys. and Surg., 1880,	New Haven.
Ellsworth, P. W.,	Coll. Phys. and Surg., 1839,	Hartford.
Ensign, R. E.,	Albany, 1858,	New Britain.
Esterly, F. P.,	Univ. Mich., 1872,	Waterbury.
Farnham, Geo. B.,	Yale, 1869,	New Haven.
Ferguson, Geo. D.,	Univ. N. Y., 1879,	Meriden.
Ferris, Anna J.,	Women's Med. Coll. Pa., '74,	Meriden.
Field, Albert,	L. I. Coll. Hosp., 1867,	East Hampton.
Finch, Geo. T.,	Bellevue, N. Y., 1877,	Thompsonville.
Fisher, Wm. E.,	Univ. Pa., 1876,	Middletown.
Fiske, J. P.,	Univ. N. Y., 1875,	Southington.
Fleischner, Henry,	Yale, 1878,	New Haven.
Flint, E. P.,	Yale, 1879,	South Coventry.
Foster, J. F. C.,	Yale, 1875,	New Haven.
Fox, Charles A.,	Coll. Phys. and Surg., 1881,	Hartford.
Fox, Charles J.,	Univ. N. Y., 1876,	Willimantic.
Fox, Roswell,	Univ. N. Y., 1847,	Wethersfield.
French, Charles H.,	Bellevue, 1880,	Waterbury.
Froelich, C. E.,	Copenhagen, 1870,	Hartford.
Frost, C. W. S.,	Coll. Phys. and Surg., 1880,	Waterbury.
Fuller, Horace S.,	Coll. Phys. and Surg., 1865,	Hartford.
Gardner, Charles,	Jefferson, 1880,	Hampton.
Garlick, S. M.,	Harvard, 1877,	Fairfield.
Gates, H. E.,	L. I. Coll. Hosp., 1861.	Litchfield.
Gaylord, C. W.,	Yale, 1872,	Branford.
Geih, H. P.,	Bellevue, 1869,	Stamford.
Gibbons, T. P.,	Jefferson, 1857,	New Haven.
Gilbert, G. C. H.,	Yale, 1844,	Westbrook.
Gilbert, S. D.,	Yale, 1871,	Fair Haven.
Gilnack, F.,	Coll. Phys. and Surg., 1867,	Rockville.
Gladwin, Ellen F. H.,	{ Women's Med. Coll., N. Y., } { Infirmary, 1872, }	{ Hartford. }
Goodrich, A. R.,	Berkshire, 1846,	Vernon.
Goodwin, R. S.,	Coll. Phys. and Surg., 1866,	Thomaston.
Goodyear, R. B.,	Yale, 1868,	North Haven.
Gorham, A. B.,	Yale, 1879,	Wilton.
Gorham, F.,	Yale, 1876,	Weston.
Grannis, John H.,	Yale, 1868,	Old Saybrook.
Graves, Thomas,	Harvard, 1870,	Danielsonville.
Gray, Henry,	Dartmouth, 1847,	Bloomfield.
Gray, John,	Yale, 1863,	Mystic River.
Gregory, James G.,	Coll. Phys. and Surg., 1868,	Norwalk.
Griffin, E. D.,	Coll. Phys. and Surg., 1865,	Old Lyme.
Griggs, E. L.,	L. I. Coll. Hosp., 1864,	Waterbury.
Griggs, O. B.,	Univ. N. Y., 1847,	Willimantic.
Griswold, J. E.,	Univ. N. Y., 1878,	Glastonbury.
Griswold, R. M.,	Univ. N. Y., 1875,	North Manchester.
Griswold, R. W.,	Coll. Phys. and Surg., 1854,	Rocky Hill.
Halleck, Winthrop B.,	L. I. Coll. Hosp., 1864,	Cromwell.
Hammond, C. E.,	Univ., N. Y.,	Portland.
Hammond, Henry F.,	Harvard, 1866,	Killingly.

Name.	Place and Date of Graduation.	P. O. Address.
Hanchett, T. S.,	Bellevue, N. Y., 1864,	Wolcottville.
Harris, G. W.,	Coll. Phys. and Surg., 1857,	Old Lyme.
Harrison, B. F.,	Yale, 1836,	Wallingford.
Hart, S. W.,	Yale, 1855,	New Britain.
Hastings, P. M.,	Coll. Phys. and Surg., 1842,	Hartford.
Hawks, Wm. W.,	Yale, 1881,	Branford.
Hazen, M. C.,	Univ. Michigan, 1855,	Haddam.
Heady, E. B.,	Yale, 1872,	Milford.
Heaney, A. G.,	L. I. Med. Hosp. Coll., 1876,	Thomaston.
Hibbard, Nathaniel,	Harvard, 1882,	Danielsonville.
Hickok, O. S.,	Berkshire, 1854,	Ridgefield.
Higgins, R. L.,	Bellevue, 1867,	South Norwalk.
Hill, E. A.,	Harvard, 1850,	East Killingly.
Hills, T. M.,	Yale, 1863,	Willimantic.
Hill, Seth,	Yale, 1866,	Stepney.
Holmes, George J.,	Albany, 1882,	New Britain.
Holmes, Wm. C.,	Coll. Phys. and Surg., 1880,	Waterbury.
Holmes, W. H.,	Harvard, 1879,	Waterbury.
Holbrook, Lowell,	Univ. N. Y., 1848,	Thompson.
Horton, W. W.,	Univ. N. Y., 1878,	Unionville.
Hotchkiss, W. H.,	Yale, 1872,	New Haven.
Hough, A. H.,	Yale, 1832,	Essex.
Hough, H. W.,	Yale, 1836,	Putnam.
Howard, John,	Dartmouth, 1881,	Hartford.
Howard, Wm.,	Yale, 1875,	Union.
Howe, H. G.,	Coll. Phys. and Surg., 1875,	Hartford.
Howland, C. H.,	Yale, 1880,	Meriden.
Hubbard, C. H.,	Yale, 1860,	Essex.
Hubbard, Robert,	Yale, 1851,	Bridgeport.
Hubbard, Stephen G.,	Dartmouth, 1843,	New Haven.
Hudson, Wm. M.,	Jefferson, 1855,	Hartford.
Hungerford, Henry,	Coll. Phys. and Surg., 1880,	Stamford.
Hunt, E. K.,	Jefferson, 1828,	Hartford.
Huntington, S. H.,	Yale, 1876,	Wilton.
Hurlburt, A. M.,	Coll. Phys. and Surg., 1879,	Stamford.
Hutchins, Samuel,	Harvard, 1841,	Danielsonville.
Ingalls, P. H.,	Coll. Phys. and Surg., 1881,	Hartford.
Ives, Levi,	Yale, 1838,	New Haven.
Ives, Robert S.,	Coll. Phys. and Surg., 1866,	New Haven.
Jarvis, Geo. C.,	Univ. N. Y., 1861,	Hartford.
Jennings, G. H.,	L. I. Coll. Hosp., 1875,	Griswold.
Jewett, P. A.,	Yale, 1839,	New Haven.
Jewett, T. B.,	Yale, 1879,	Birmingham.
Johnson, M. M.,	Univ. N. Y., 1877,	Hartford.
Johnson, S. C.,	Conn. Med. Soc., 1825,	Seymour.
Johnson, F. E.,	Univ. N. Y., 1879,	Mansfield Depot
Judson, Walter,	Coll. Phys. and Surg., 1870,	New Haven.
Judson, W. H.,	Jefferson, 1878,	Wauregan.
Kelsey, Wm. S.,	Jefferson, 1876,	Willington.
Kendall, John C.,	Coll. Phys. and Surg., 1875,	Norwalk.
Kendall, Joshua C.,	Coll. Phys. and Surg., 1875,	Seymour.
Kenister, J. N.,	Harvard, 1872,	Middletown.
Kent, J. B.,	Harvard, 1869,	Putnam.
Ketchum, S. G.,	Univ. Vt., 1880,	Woodbury.
Kinney, E. C.,	N. Y. Med. Coll., 1858,	Norwich.

Name.	Place and Date of Graduation.	P. O. Address.
Knight, R. P.,	Coll. Phys. and Surg., 1880,	Lakeville.
Knight, W. W.,	Berkshire, 1856,	Sharon.
Knight, W. W.,	Univ. N. Y., 1876,	Hartford.
Knowlton, W. M.,	Univ. Vt., 1880,	Moodus.
Lacey, Wm. F.,	Yale, 1844,	Danbury.
Lauder, Robert,	Yale, 1871,	Bridgeport.
LaPierre, Julian,	Bellevue, 1871,	Greeneville.
LaRue, Omer,	Victoria, Montreal, 1871,	Putnam.
Latour, A. A.,	Bishops Coll., Montreal,	Grosvenordale.
Leighton, A. W.,	Yale, 1879,	New Haven.
Leavenworth, D. C.,	Yale, 1865,	New Haven.
Leonard, A. S.,	Coll. Phys. and Surg., 1866,	Woodstock Valley.
Leonard, E. K.,	Conn. Med. Soc., 1866,	Rockville.
Lewis, B. S.,	Harvard, 1875,	New Haven.
Lewis, G. F.,	Yale, 1856,	Bridgeport.
Lewis, G. F.,	Yale, 1864,	Collinsville.
Lewis, John B.,	Univ. N. Y., 1853,	Hartford.
Lewis, Wm. A.,	Harvard, 1851,	Moosup.
Lewis, Wm. J.,	Coll. Phys. and Surg., 1878,	Hartford.
Lindsley, C. A.,	Yale, 1852,	New Haven.
Lindsley, C. P.,	Yale, 1878,	New Haven.
Lines, J. F.,	Yale, 1862,	New Haven.
Loekwood, W. A.,	Coll. Phys. and Surg., 1864,	Norwalk.
Luby, John F.,	Coll. Phys. and Surg., 1878,	New Haven.
Lyon, E. B.,	Berkshire, 1862,	New Britain.
Lyon, Irving W.,	Coll. Phys. and Surg., 1863,	Hartford.
Lyou, A. W.,	Columbus, 1876,	Bridgeport.
Mailhouse, Max,	Yale, 1878,	New Haven.
Manwaring, R. A.,	Yale, 1833,	New London.
Marcy, R. A.,	Univ. N. Y., 1882,	New Preston.
Markham, George E.,	Univ. N. Y., 1882,	Burnside.
Martin, T. F.,	Univ. N. Y.,	Bridgeport.
Mason, J. K.,	Harvard, 1861,	Suffield.
Masou, W. H.,	Buffalo, 1859,	Norwich.
Mather, Wm. H.,	Univ. N. Y.,	Suffield.
Mathewson, R. W.,	Coll. Phys. and Surg., 1835,	Durham.
May, A. E.,	Univ. Vermont, 1879,	Naugatuek.
Mayer, Nathan,	Cincinnati, 1857,	Hartford.
McGaughey, J. D.,	Jefferson, 1870,	Wallingford.
McIntosh, L. W.,	Berkshire,	East Hartford.
McKnight, E. J.,	Coll. Phys. and Surg., 1879,	East Hartford.
McDonald, E. W.,	Univ. N. Y., 1871,	Waterbury.
Mead, E. H.,	Univ. Michigan, 1878,	Berlin.
Miller, W. S.,	Yale, 1879,	South Britain.
Morgan, John,	Yale, 1869,	Middletown.
Morgan, Wm. D.,	Coll. Phys. and Surg., 1877,	Hartford.
Morse, E. T.,	Burlington, 1877,	Thompson.
Munger, Elisha,	Yale, 1875,	East Lyme.
Munger, W. S.,	Yale, 1855,	Watertown.
Munson, B. W.,	Yale, 1869,	Bridgeport.
Nelson, A. W.,	Harvard, 1861,	New London.
Newcomb, J. J.,	Yale, 1875,	Litchfield.
Newton, C. B.,	Yale, 1851,	Stafford Springs.
Newton, S. B.,	Berkshire, 1854,	East Hartford.
Neville, J. J. M.,	Coll. Phys. and Surg., 1876,	Waterbury.

Name.	Place and Date of Graduation.	P. O. Address.
Nickerson, N.,	N. Y. Med. Coll., 1857,	Meriden.
Nicoll, John,	Yale, 1854,	New Haven.
Nolan, Robert,	Univ. Vermont, 1877,	Norwalk.
Nooney, E. D.,	Coll. Phys. and Surg., 1871,	Stratford.
North, Alfred,	Coll. Phys. and Surg., 1861,	Waterbury.
North, J. H.,	L. I. Coll. Hosp., 1873,	Goshen.
Noyes, S. W.,	Univ. Pa., 1868,	Haddam.
Nye, Elisha B.,	Yale, 1838,	Middletown.
Oakes, H. A.,	Coll. Phys. and Surg., 1878,	New Haven.
O'Connor, M. C.,	Coll. Phys. and Surg., 1873,	New Haven.
O'Flaherty, John,	Albany, 1864,	Hartford.
Olin, Frank H.,	Univ. Michigan, 1881,	East Woodstock.
Olmstead, John,	Yale, 1874,	Middletown.
Osborne, C. H.,	Yale, 1876,	Southport.
O'Sullivan, T. J.,	Univ. N. Y., 1874,	Birmingham.
Packard, Geo. B.,	Univ. Vermont, 1874,	Hartford.
Paddock, Lewis S.,	Univ. N. Y., 1854,	Norwich.
Page, C. W.,	Harvard, 1870,	Hartford.
Park, Charles E.,	Yale, 1881,	New Haven.
Parker, J. N.,	Yale, 1877,	South Manchester.
Parmele, Geo. L.,	L. I. Coll. Hosp., 1869,	Hartford.
Parsons, E. F.,	Coll. Phys. and Surg., 1858,	Thompsonville.
Peck, A.,	Univ. N. Y., 1875,	Norwich.
Perkins, W. S. C.,	Coll. Phys. and Surg., 1860,	Norwich.
Phelps, J. W.,	Castleton, Vt., 1846,	Wolcottville.
Phinney, E.,	Yale, 1835,	Norwich.
Pierpont, Henry,	Yale, 1854,	New Haven.
Pinney, Chas. H.,	Coll. Phys. and Surg., 1853,	Derby.
Platt, G. L.,	Yale, 1838,	Waterbury.
Porter, George L.,	Jefferson, 1862,	Bridgeport.
Porter, Isaac G.,	Univ. Pa., 1833,	New London.
Powers, F.,	Coll. Phys. and Surg., 1870,	Westport.
Ramsey, James,	Bellevue, 1879,	Waterbury.
Richardson, D. A.,	Yale, 1880,	Monroe.
Rice, F. A.,	Bellevue, 1874,	Bridgeport.
Rising, Mary J.,	Univ. Michigan, 1876,	Bridgeport.
Risley, S. G.,	Univ. N. Y., 1846,	Rockville.
Roberts, Edward R.,	Yale, 1880,	Fair Haven.
Roberts, G. R.,	Coll. Phys. and Surg., 1878,	Collinsville.
Robinson, Remus,	{ Coll. Phys. and Surg., Bal- timore, 1881, }	{ Norwich. }
Robinson, R.,	L. I. Coll. Hosp., 1869,	Danielsonville.
Rockwell, S. W.,	Yale, 1855,	East Windsor Hill.
Rockwell, T. M.,	Univ. N. Y., 1881,	Rockville.
Rodman, Charles S.,	Coll. Phys. and Surg., 1868,	Waterbury.
Rogers, Charles H.,	Yale, 1847,	Central Village.
Rogers, Fred.,	Univ. N. Y., 1863,	Willimantic.
Root, E. K.,	Univ. N. Y., 1879,	Hartford.
Ruickoldt, A.,	Univ. Jena, Austria, 1865,	New Haven.
Russell, Gurdon W.,	Yale, 1837,	Hartford.
Russell, Wm. S.,	Yale, 1880,	Wallingford.
Russell, T. H.,	Yale, 1875,	New Haven.
Sanford, Edward,	N. Y. Med. Coll., 1859,	West Cornwall.
Sanford, George W.,	Berkshire, 1836,	Tariffville.

Name.	Place and Date of Graduation.	P. O. Address.
Sanford, Leonard J.,	Jefferson, 1854,	New Haven.
Sawtelle, Frederick G.,	L. I. Coll. Hosp., 1880,	Pomfret.
Sears, C. A.,	Univ. N. Y., 1862,	Portland.
Sheffrey, C. W.,	Yale, 1874,	Bridgeport.
Shelton, Gould A.,	Yale, 1869,	Huntington.
Shepherd, George R.,	Yale, 1866,	Hartford.
Shew, A. M.,	Jefferson, 1864,	Middletown.
Shove, H. W.,	Yale, 1853,	Woodbury.
Simmons, J. H.,	Univ. N. Y., 1863,	Ashford.
Smith, A. J.,	Coll. Phys. and Surg., 1863,	Bridgeport.
Smith, F. J.,	Yale, 1882,	Hartford.
Smith, H. B.,	Yale, 1876,	Westville.
Smith, H. P.,	Coll. Phys. and Surg.,	Norwich.
Smith, F. S.,	Univ. N. Y., 1875,	Stafford Springs.
Sprague, S. L.,	Harvard, 1850,	Norwich.
Stanley, C. E.,	Univ. Pa., 1876,	Middletown.
Stanton, Geo. D.,	Bellevue, 1865,	Stonington.
Stanton, J. G.,	Bavaria, 1873,	New London.
Steadman, G. W.,	Bellevue, N. Y., 1875,	Southington.
Stearns, Henry P.,	Yale, 1855,	Hartford.
Stetson, J. E.,	Yale, 1881,	New Haven.
Steven, John A.,	Univ. N. Y., 1872,	Hartford.
Stevens, J. H.,	Coll. Phys. and Surg., 1862,	Norfolk.
St. John, S. B.,	Coll. Phys. and Surg., 1870,	Hartford.
Stoddard, Thomas,	Yale, 1836,	Seymour.
Stone, Geo. S.,	Coll. Phys. and Surg., 1865,	New Britain.
Storrs, M.,	Yale, 1853,	Hartford.
Strickland, R. S.,	Albany, 1839,	Enfield.
Sumner, C. F.,	Yale, 1854,	Bolton.
Surridge, Charles G.,	Yale, 1879,	New Haven.
Swett, W. P.,	Univ. Vermont, 1876,	Harwinton.
Swasey, E. P.,	Coll. Phys. and Surg., 1869,	New Britain.
Swift, Edwin E.,	Univ. N. Y., 1880,	Hamden.
Swift, E. D.,	Univ. N. Y., 1849,	Hamden.
Talcott, Alvan,	Yale, 1831,	Guilford.
Teeple, G. M.,	Albany, 1849,	Bridgeport.
Thatcher, James K.,	Yale, 1879,	New Haven.
Thomson, C. S.,	Yale, 1822,	Fair Haven.
Thomson, W. H.,	Yale, 1862,	Fair Haven.
Thomson, E. L.,	Yale, 1874,	New Haven.
Tiffany, R. H.,	Castleton, Vt., 1837,	Hartford.
Tinker, W. R.,	Univ. N. Y., 1880,	South Manchester.
Todd, Wm. S.,	Coll. Phys. and Surg., 1869,	Ridgefield.
Tracy, A. W.,	McGill Univ., Canada, 1873,	Meriden.
Treadwell, O. F.,	Yale, 1865,	New Haven.
Trigg, H. S.,	Univ. Vermont, 1881,	Hartford.
Turner, Sylvester,	Yale, 1842,	Chester.
Tyler, David A.,	Yale, 1844,	New Haven.
Tyler, Nathan P.,	Yale, 1879,	New Haven.
Wainwright, W. A. M.,	Coll. Phys. and Surg., 1867,	Hartford.
Wakeman, M. H.,	Yale, 1854,	Redding.
Warner, Eli,	Coll. Phys. and Surg., 1867,	Hartford.
Warner, A. S.,	Dartmouth, 1847,	Wethersfield.
Warren, J. A.,	Coll. Phys. and Surg., 1860,	Ellington.
Warren, W. Foster,	Harvard, 1882,	Putnam.
Way, Henry E.,	Univ. N. Y., 1849,	Bristol.

Name.	Place and Date of Graduation.	P. O. Address.
Webb, D. M.,	Yale, 1849,	Madison.
Welch, Geo. K.,	Coll. Phys. and Surg., 1878,	Hartford.
Welch, James,	Berkshire, 1831,	West Winsted.
Welch, William W.,	Yale, 1839,	Norfolk.
Wheeler, Frank,	Coll. Phys. and Surg., 1852,	Farmington.
White, F. O.,	Yale, 1873,	New Haven.
White, Moses C.,	Yale, 1854,	New Haven.
White, R. A.,	Yale, 1832,	Weatogue.
Whiton, F. H.,	Dartmouth, 1871,	North Manchester.
Whittemore, F. H.,	Bellevue, N. Y., 1874,	New Haven.
Whittemore, F. J.,	Univ. N. Y., 1851,	New Haven.
Wildman, W. G.,	Coll. Phys. and Surg., 1880,	Danbury.
Wile, William C.,	Univ. N. Y., 1870,	Sandy Hook.
Williams, A. S.,	Jefferson, 1840,	Brookfield.
Wilson, F. M.,	Harvard, 1875,	Bridgeport.
Wilson, S. A.,	Yale, 1852,	Windsor.
Winchell, A. E.,	Coll. Phys. and Surg., 1865,	New Haven.
Witter, John,	Yale, 1857,	Putnam.
Witter, William,	Yale, 1865,	Greeneville.
Wolcott, Willard,	Harvard, 1879,	Meriden.
Wood, Luther H.,	Yale, 1869,	Wolcottville.
Wood, William,	Univ. N. Y., 1847,	East Windsor Hill.
Woodruff, William,	Yale, 1826,	Thomaston.
Woodward, Ashbel,	Bowdoin, 1829,	Franklin.
Wordin, N. E.,	Jefferson, 1873,	Bridgeport.
Worthington, A. B.,	Yale, 1847,	Middle Haddam.
Wright, F. W.,	Bellevue, 1880,	Hamden.
Wright, T. G.,	Univ. N. Y., 1865,	Plainville.
Wright, J. W.,	Univ. N. Y., 1880,	Bridgeport.
Young, Francis J.,	Yale, 1866,	Bridgeport.
Zink, Walter,	Wurtzburg,	North Branford.

Members noticing any errors or omissions in any part of their record will please inform the Secretary for correction in future lists.

APPENDIX A.

The Committee of Examination met at the rooms of the Yale Medical College, June 26th. The Board was called to order by Prof. Lindsley, and Dr. J. H. Granniss was chosen to report the doings of the Board to the State Society.

Three candidates for graduation presented themselves, and but two were approved, viz., Frederic Sumner Smith, A.B., and Frank Henry Wheeler, A.B. The above named passed their examination very creditably, as also did the gentlemen who were examined on partial courses.

Attest,

J. H. GRANNISS, M.D.,

Reporter.

APPENDIX B.

AN ACT TO PREVENT IRREGULAR MEDICAL PRACTICE.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

SECTION 1. Any itinerant person, not an inhabitant of this State, who shall by circular, handbill, or any other mode of advertisement, profess to treat, and shall in any town in this State treat disease or injury by any drug, nostrum, manipulation, or other expedient, shall be fined twenty-five dollars for each day that he shall exercise his profession without procuring a license therefor.

SEC. 2. Selectmen in towns, and the chief officer of police in cities, may issue such licenses upon payment to the town or city treasurer by such itinerant person of the sum of twenty dollars, for each day for which his license may be granted. The license shall distinctly state the number of days for which it shall be in force, and may be renewed at its expiration for any further time, upon the same terms. Such selectmen and chief officer of police shall record such licenses in books kept by them for that purpose, which shall be open to public inspection.

SEC. 3. Prosecutions for violations of this act may be heard and determined by police courts, where established, and by justices of the peace in towns in which such courts have no criminal jurisdiction.

CHARTER
OF THE
MEDICAL DEPARTMENT OF YALE COLLEGE.*

Be it enacted by the Senate and House of Representatives in General Assembly convened:

SECTION 1. The Medical Department established in Yale College, pursuant to an agreement between the President and Fellows of Yale College in New Haven, and the President and Fellows of the Connecticut Medical Society, shall be known and acknowledged by the name of THE MEDICAL DEPARTMENT OF YALE COLLEGE.

SEC. 2. There shall be established in the Medical Department such Professorships as from time to time may be determined by the President and Fellows of Yale College. There shall be a joint committee for the nomination of candidates to fill these Professorships, which committee shall be appointed in equal numbers by the President and Fellows of Yale College and the President and Fellows of the Connecticut Medical Society, and no person shall be chosen to any Professorship by said President and Directors of Yale College who shall not be approved by a majority of said committee.

SEC. 3. The Board of Examination for the Medical Degree shall consist of the Professors of the Medical Department of the College, and an equal number of the members of the Connecticut Medical Society, appointed by the President and Fellows of the same; and the President of the Medical Society shall be, *ex-officio*, President of the Examining Board; and in his absence a President *pro tempore* shall be appointed by the members chosen by the Medical Society.

SEC. 4. Candidates for the degree of Doctor of Medicine must present satisfactory evidence of having pursued medical studies

* Enacted at January Session of Legislature, 1879.

for such time as the President and Fellows of Yale College may determine; must be twenty-one years of age, and of good moral character.

This degree shall be conferred by the President of Yale College, upon the recommendation of the Examining Board, and the diploma shall be signed by him and by the Examining Board, or a majority of them.

The President of Yale College may also confer the honorary degree of Doctor of Medicine upon those persons whom the President and Fellows of the Connecticut Medical Society shall recommend for that purpose; it being understood that any power which has hitherto been possessed by said Society of introducing members to its fellowship may be exercised at their discretion.

SEC. 5. *And be it further enacted*, That if at any time after the passage of this act it shall appear to the President and Fellows of Yale College, or to the President and Fellows of the Connecticut Medical Society, or either of them, to be desirable for the cause of medical education in the said University and in the State of Connecticut that the covenant or articles of agreement, pursuant to which the relation between these two bodies corporate (referred to in the first section of this act) now exists, should be canceled and rendered of no effect, such act of dissolution may be consummated by mutual agreement between the two parties in interest, without further legislative action,—and in that event the management and control of the Medical Department shall devolve solely upon the President and Fellows of Yale College, and upon the Medical Faculty under their direction, without prejudice to any *vested* interest, contract, or endowment; and any prerogatives heretofore possessed by the Connecticut Medical Society shall revert to the same.

SEC. 6. *And be it further enacted*, That the act entitled “An Act to incorporate the Connecticut Medical Society, and to establish the Medical Institution of Yale College,” and all acts in addition to, and in alteration thereof, be, and the same are hereby repealed: *provided*, that all proceedings had, and obligations imposed in pursuance of the acts hereby repealed, shall have the same effect as though said acts were still in force.

SEC. 7. This resolution may be amended or repealed at the pleasure of the General Assembly.

CHARTER AND BY-LAWS
OF THE
CONNECTICUT MEDICAL SOCIETY.

CHARTER.

GENERAL ASSEMBLY, MAY SESSION, 1870, Amending the Charter of the Connecticut Medical Society.

Resolved by this Assembly:

SECTION 1. That the Physicians and Surgeons now members of the Connecticut Medical Society, and all Physicians and Surgeons who shall be associated with them in pursuance of the provisions of this act, shall be and remain a body politic and corporate, by the name of THE CONNECTICUT MEDICAL SOCIETY; and by that name they and their successors shall and may have perpetual succession; shall be capable of suing and being sued, pleading and being impleaded, in all suits of whatever name and nature; may have a common seal, and may alter the same at pleasure; and may also purchase, receive, hold, and convey any estate, real or personal, to an amount not exceeding one hundred thousand dollars.

SEC. 2. That the superintendence and management of the Society shall be vested in a body to be known and called by the name of "The President and Fellows of the Connecticut Medical Society;" which body shall have power to prescribe the duties of its officers and members, and fix their compensation; to establish the conditions of admission, dismissal, and expulsion; to lay a tax from time to time upon the members, not exceeding five dollars in each year; to collect the same, and to hold and dispose of all moneys or other property belonging to the Society in such manner as they may think proper to promote the objects and interests of the Society; and in general, to make such by-laws and regulations for the due government of the Society, not repugnant to the laws of the United States or of this State, as may be deemed necessary.

SEC. 3. That the President and Fellows of the Connecticut Medical Society shall be composed of the officers of the Society for the time being, and of Fellows (not less than three nor more than five) chosen by and from each of the County Associations.

SEC. 4. That hereafter no one shall be admitted to membership in any County Association having connection with this Society, unless he shall have received the degree of Doctor of Medicine, or have been admitted *ad eundum*, from such medical authorities as this Society shall deem proper to recognize.

SEC. 5. It shall be the duty of the several clerks of the County Associations, in their respective counties, to collect and pay over to the Treasurer of the Society all such taxes as shall from time to time be laid by the President and Fellows, upon the members of the Society as aforesaid; and for that purpose said clerks may procure a warrant, under the hand of a justice of the peace, against such member or members of the Society as shall neglect or refuse to pay the taxes so imposed upon them as aforesaid; which warrant any justice of the peace is hereby empowered to issue, and said warrant shall be directed to the sheriff or his deputies of the county in which such delinquent member or members reside; and said sheriff, or either of his deputies, on receiving such warrant, may therewith proceed to enforce the collection of such tax or taxes, in the same manner, and with the addition of the same fees, as are by law prescribed and allowed to the collectors of town taxes. And if any of the clerks of the County Associations shall neglect or refuse to collect the taxes entrusted to him to collect, by the time the same are made payable, or having collected the same shall neglect or refuse to pay the same over to the Treasurer of the Society, such Treasurer may cause a suit or suits to be instituted against such delinquent, in the name of the Society, before any court proper to try the same, and the same to pursue to final judgment; and the clerks shall be allowed and receive a compensation of five per centum on all moneys collected by them respectively, and paid to the Treasurer of the Medical Society.

SEC. 6. That these amendments shall take effect on the day of its passage; and so much of the Act entitled an Act to incorporate the Connecticut Medical Society, approved June 5, 1834, and all such acts in addition thereto and amendments thereof as are inconsistent herewith, be, and the same are hereby repealed.

Approved, July 8, 1870.

BY-LAWS.

CHAPTER I.

Titles and Meetings.

SECTION 1. This Society shall be known by the name of THE CONNECTICUT MEDICAL SOCIETY; and it shall be composed of the members of the County Associations and of Honorary Members.

SEC. 2. The Connecticut Medical Society shall hold an annual convention on the Thursday following the fourth Wednesday in May. The annual convention shall assemble alternately at New Haven and Hartford. Ten members shall constitute a quorum. If the President and Vice-President be absent, the Society may choose a President *pro tempore*.

SEC. 3. The President and Fellows of the Connecticut Medical Society shall hold an annual meeting.

SEC. 4. The County Associations shall hold in their respective counties an annual meeting.

CHAPTER II.

Officers.

SECTION 1. The officers of the Society shall consist of a President, Vice-President, Treasurer, Secretary, Committee on Matters of Professional Interest in the State, and the Presidents of the County Association, who shall be Vice-Presidents *ex-officio*.

SEC. 2. It shall be the duty of the President to preside at the annual convention, and at all the meetings of the President and Fellows, preserve order, state and put questions, call for reports of committees, enforce the observance of the by-laws, and perform such other duties appropriate to his office as the Society shall assign him. At the annual meeting of the President and Fellows, the President shall present such matters for their consideration as he may think require attention. At the annual convention he shall deliver an address on some suitable subject.

SEC. 3. In the absence or disability of the President, the Vice-President shall preside, and in case of a vacancy in the office of President, caused by death, resignation, or removal, all the duties pertaining to it shall devolve on the Vice-President.

SEC. 4. It shall be the duty of the Treasurer to take charge and keep a correct account of all moneys belonging to the Society, together with the receipts and disbursements, and render annually to the President and Fellows a statement of all moneys received and paid by him. He shall preserve, for the benefit of the Society, all donations and other movable property committed to his charge, and keep an exact list of the same, together with the name of the respective donors. He shall not pay any money out of the treasury, nor make any investment of the funds of the Society, or change the same, but by order of the President and Secretary. And he shall deliver to his successor all books and papers, with the balance of cash or other property of the Society in his hands. The Treasurer shall be *ex-officio* a member of the Committee of Publication.

SEC. 5. The Secretary shall have charge of the records of the Society, attend all the meetings of the President and Fellows, and the annual convention of the Society, record all the transactions of the same, give true copies of them when thereto requested, conduct their correspondence, and have the custody of the seal of the Society. The Secretary shall be *ex-officio* chairman of the Committee of Publication. The Secretary shall send due notices of the annual meeting to each member, and publish notice of the same in three of the daily papers printed in this State. When definitely informed that the delegates to the American Medical Association or any State Society cannot attend, he may appoint substitutes. The Secretary shall send each year an extra copy of the published "Proceedings" of the Society to each of the Clerks, for the use of the County Associations; also to other State Societies and to Honorary Members.

SEC. 6. The Committee on Matters of Professional Interest in the State, shall consist of three, and be considered members *ex-officio* of "the President and Fellows of the Connecticut Medical Society," to be elected annually by ballot, the first named to be Chairman, whose duty it shall be, at every Annual Convention, to report the progress of our science, particularly in Connecticut—remarkable and instructive cases of disease that may have come to their knowledge—interesting facts or discoveries relating to medicine—all circumstances connected with epidemics (if any have prevailed), and the treatment adopted, whether successful or otherwise—in short, whatever influences may concern the health of the citizens

of Connecticut. And the more effectually to perfect this report, it shall be the duty of each county and other Associations represented in this Society annually to appoint one of its members as a reporter, who shall furnish to this committee, on or before the first day of May, all the information he can get relative to these subjects, within the limits of the district in which the local Association exists.

SEC. 7. Any officer of the Society may, for sufficient reasons, resign his office, or may be removed therefrom by order of the President and Fellows, for neglect, inattention, or mal conduct; in either of which cases, or on the death of any officer, the President and Fellows shall supply the office vacated as soon as may be convenient.

SEC. 8. The necessary expenses of the Treasurer, Secretary, and Chairman of the Committee on Matters of Professional Interest in the State, shall be paid.

CHAPTER III.

President and Fellows of the Connecticut Medical Society.

SECTION 1. There shall be an annual meeting of the President and Fellows of the Connecticut Medical Society, on the day preceding the annual convention of the Society, and in the same city where the convention is to be held.

SEC. 2. The President, Vice-President, and *ex-officio* Vice-Presidents, Treasurer, Secretary, Committee on Matters of Professional Interest, and Fellows shall be known and called by the name of the President and Fellows of the Connecticut Medical Society; a majority of whom legally assembled together shall be a quorum for the transaction of any business; and shall have the power to make by-laws for the regulation and government of the Society, and for the promotion of the objects of the same, not repugnant to the laws of the United States or of this State; to expel any member of the Society for misconduct; to make rules for the admission of members of the Society, and for their dismissal from the same; to lay a tax upon each member of the Society, not exceeding five dollars in each year; to dispose of the moneys thus raised and all other property of the Society in such a manner as they may think proper to promote the objects and interests of the Society.

The President and Fellows at any annual meeting, and after one year's nomination of every candidate, and not otherwise, may, by a major vote of those present, elect eminent physicians not resident in this State to be honorary members of this Society. But those elected shall not exceed three in number in any year.

SEC. 3. At all the meetings of the Fellows for the transaction of business, the President of the Society, or in case of his absence the Vice-President, shall preside; and in case of the absence of the President and Vice-President, the Fellows present may elect one of their own number as President for the occasion.

SEC. 4. The President of the Society, or in case of his death or inability the Vice-President, on any special occasion, shall have power to call a meeting of the President and Fellows at such time and place as he may think proper, when applied to by any five Fellows, two of whom shall be members of different County Societies, and he shall cause notice thereof to be given by the Secretary to each member of the time and place of meeting, which notice shall be mailed at least one week previous to said meeting; and the President shall also cause twenty days' notice of the special meeting to be given in two newspapers printed in this State.

SEC. 5. The Committee of Examination, the Committee to nominate Professors in the Medical Institution, and the Committee to nominate the Physician to the Retreat for the Insane shall be chosen by ballot. Only two persons shall be elected on each of these Standing Committees each year; the first two on the list to be dropped, and the two chosen to be placed at the bottom; but any person may be re-elected. These Standing Committees of the Society shall report annually to the President and Fellows, whenever they have had occasion to act in their official capacity.

The Secretary and Treasurer shall be *ex-officio* members of the Committee of Publication. This Committee shall consist of three, the other member to be chosen by ballot.

The Nominating Committee shall consist of one from every County Association represented; and the Fellows of each of said Associations respectively shall choose from among themselves one to represent them on said Committee. This Committee shall report at the time appointed for the election.

All other committees shall be appointed by the presiding officer.

SEC. 6. It shall be the duty of the Fellows of the several counties to present to the annual convention short obituary sketches of

deceased members, which shall be revised, amended, or condensed by the Committee of Publication, as they deem expedient. In case, however, of any considerable changes in obituary sketches, either in revising, amending, or condensing, said sketches shall be submitted to the writer before publication in the Proceedings.

SEC. 7. The President shall, at an early hour of the session, appoint a Committee of three Fellows, of which the Secretary shall be one, to be called the Business Committee, to whom all reports of cases, dissertations, or other papers designed to be read at the annual convention shall be handed. And this Committee shall examine them and recommend the manner and order in which they shall be presented to the convention.

CHAPTER IV.

County Associations.

SECTION 1. The members of the Connecticut Medical Society shall meet annually in their respective counties, and at such other times and places as have been or may hereafter be agreed upon by them; provided the annual meeting shall be at least four weeks before the fourth Wednesday in May. Each County Association shall be known and called by the name of the county in which it exists, and shall choose from among themselves a President, Clerk, and such other officers as may be found necessary. At their annual meeting they shall elect by ballot, of their own number, in each county, five, except in the county of Tolland, which shall elect three Fellows, to have part in the superintendence and management of the Society. Each County Society shall elect as many alternates as they elect Fellows, who shall act in the absence of their primaries.

SEC. 2. The County Associations, in their respective counties, shall have power to adjourn meetings, and to call special meetings from time to time, as they shall deem expedient; and they may adopt such by-laws and regulations for their own government, and for the promotion of medical science, as they may think proper, not contrary to the laws of the State or the by-laws of the Connecticut Medical Society.

SEC. 3. Any person of good moral character, found to possess the qualifications prescribed by the charter and by-laws of the Society, may, by any County Association, at any meeting legally

holden, be admitted to membership, by a major vote of the members present, by ballot, provided he is residing and practicing in said county, and makes application for that purpose.

SEC. 4. All persons so elected shall, within one year after such election, subscribe the by-laws of the Society, or otherwise declare in writing their assent to the same, or such election shall be void.

SEC. 5. Any County Association may, by a major vote, dismiss from the Society any member who shall remove from the State, or who shall leave the profession for other pursuits.

SEC. 6. Any County Association may, if it is deemed expedient, recommend to the President and Fellows, for dismissal from the Society, any member residing in that county who shall apply for such dismissal by a written request to that effect, delivered to the Clerk of said County Association at least ten days before the time of holding any legal county meeting; and also any member who shall refuse or neglect to pay taxes; and upon the approval of such recommendation by the President and Fellows in annual meeting, the connection between such member and the Society shall be dissolved. *Provided*, that no member shall be honorably dismissed from the Society until all his taxes shall have been paid.

SEC. 7. All violation of the by-laws of the Connecticut Medical Society, or of the Medical Police adopted by the Society, or of the rules and regulations passed by the County Associations in conformity with the by-laws of the State Society, may be prosecuted and tried in the respective County Associations, under the following regulations, viz.: They shall appoint from among their members three persons to be known as the Board of Censors, the duties of which board shall be to take cognizance and advisory consideration of all instances of violation of the by-laws of the Society, or of the code of ethics adopted by the Society, that may come to their knowledge or be properly presented to them, and shall make report to the County Association of their action whenever it shall seem to them expedient, or they shall be thereto ordered by the Association. The member accusing another of a violation of any of the before mentioned regulations, shall make a statement, in writing, of the transaction which he deems a misdemeanor, and lay the same before a Fellow of the Society; and such Fellow shall issue a notification to the accused to appear before the next county meeting, stating the time when and the

place where it is to be held, to defend, if he sees fit, against such accusation. A copy of such accusation and notification shall be left with the accused, or at his last usual place of abode, at least twelve days previous to the time of holding the next county meeting. And the accuser shall cause the said accusation and notification to be served and returned to the Clerk of the County Association, on or before the day of their sitting; at which day the case with the accompanying papers shall be referred to the Board of Censors herein before mentioned, who shall hear all evidence and report to the Association the conclusions at which they have arrived, and their reasons therefor, and the offender, upon conviction, may be punished by admonition, by suspension from the privileges of the Society for a period not exceeding two years, or by expulsion from the Society. *Provided*, that no sentence of expulsion shall be valid until confirmed by the President and Fellows in annual meeting.

SEC. 8. When a new Clerk is chosen in any of the County Associations, his predecessor shall deliver over to him all the records and papers pertaining to the office, retaining copies of the same, if he think proper.

SEC. 9. It shall be the duty of the several Clerks of the County Associations, in their respective counties, to collect and pay over to the Treasurer of the State Society all such taxes as shall from time to time be laid by the President and Fellows upon the members of the Connecticut Medical Society. A certified copy of the levy of the tax signed by the President and Secretary, shall be sent annually to the Clerk of each County Association. And the Clerks shall be allowed a compensation of five per cent. on all moneys collected by them respectively and paid to the Treasurer of the State Society. *Provided*, such additional sum as the County Association may direct, not exceeding five per cent. of the moneys collected, may be retained by the Clerk to pay the expenses of the meetings of said Association.

If any members neglect or refuse to pay the taxes legally imposed upon them, it shall be the duty of the Clerks of the County Associations to which they belong to proceed against such delinquent members according to law, in the collection of the same. And if any of the Clerks of the County Associations shall neglect or refuse to collect the taxes entrusted to him to collect, by the time the same are due; or having collected the same, shall neglect

to pay the same over to the Treasurer of the State Society, such Treasurer may cause suit to be instituted against such delinquent, in the name of the Society, before any Court proper to try the same, and the same pursue to final judgment. The expenses incurred by the Clerks of the County Associations in collecting taxes shall be canceled and paid by the Treasurer.

SEC. 10. The Secretary shall send to each Clerk, before the annual meeting of the County Medical Association, blanks for the returns required for the Secretary and Treasurer of the State Society. The Clerks shall return to the Secretary a true list of the officers elected at the annual meeting, all the members of the County Association, with the post-office address of each—in case of new members the *date and place of graduation should be invariably given*; the names of members who have died since the last meeting, with the name of the person appointed to write an obituary sketch; also a list of delinquent tax-payers, with the amount due from each, and all other information therein required that may be necessary for the Secretary to make up the programme for the annual convention. This return shall be certified by the Clerk, who shall also transmit to the Secretary obituary sketches of those who have died, and all papers destined for the Transactions of the Society, or to be acted upon in convention. The blank to be returned to the Treasurer shall contain a list of the taxable members and those exempt, with the reason therefor; a list of the Fellows, and *of those claiming exemption from taxes for the first time*, if any—with the cause therefor. Also, such other facts as may be therein required, the whole return to be certified by the Clerk. Those who fail in this duty shall be subject to a fine of five dollars, to be collected by the Treasurer.

CHAPTER V.

Members.

SECTION 1. Each member of the Society shall have free access to the records of the Society, and of the County Association to which he belongs, and may take attested copies thereof if he request them.

SEC. 2. All the members of the Connecticut Medical Society have the privilege of attending all meetings of the President and Fellows, and performing all the duties of Fellows except voting.

Honorary members shall have the privilege of a seat at the annual convention, and of taking part in the discussions; but they shall not vote on any question, nor be eligible to any office.

SEC. 3. The payment of the annual tax shall be optional with all members over sixty years of age.

SEC. 4. Any member of the Society who shall make, vend, or publicly recommend, or who is directly or indirectly interested in the manufacture, use, or sale of any nostrum or patent medicine, shall not be eligible to any office, and is liable to be suspended from the privileges of the Society, or to expulsion.

SEC. 5. No member of the Society shall hold professional consultation or intercourse with any other than licensed physicians and surgeons in regular standing.

SEC. 6. It shall be the duty of every member of this Society to accuse any other member of the Society for such misdemeanors as he deems contrary either to the By-Laws, Medical Police, or Rules and Regulations adopted by the Society; and the accuser shall proceed in the manner directed in chapter iv, sec. 7, of By-Laws.

CHAPTER VI.

Elections.

SECTION 1. All elections of officers of the Society shall be at the annual meeting of the President and Fellows, and by ballot; and a majority of votes shall be requisite to elect.

SEC. 2. Before the President and Fellows proceed to ballot, the Committee on Nominations shall present a list of candidates for the several officers to be elected; and, an opportunity having been given to the members to make other nominations, the Society shall then be called to ballot; if no election is obtained on the first canvass, the two highest shall be the candidates for the next balloting. When a choice is made, the persons chosen shall hold their office during one year, and until others shall be elected.

SEC. 3. The nominating Committee shall report names for delegates to the American Medical Association, and to corresponding Societies, and shall also nominate a Committee of Arrangements, whose duty it shall be to provide convenient accommodations for the next annual convontion, and an Anniversary Chairman, who shall preside at the dinner of the next year. The Anniversary Chairman shall be one of the Committee of Arrangements.

CHAPTER VII.

The Society adopts the Code of Ethics of the American Medical Association as a part of its Constitution and By-Laws.

No article of the By-Laws, as now adopted, shall be altered or amended, except the subject proposed shall have been submitted in writing to the consideration of the President and Fellows at a previous annual meeting; and a vote of two-thirds of the members present in that body shall be necessary to ratify and confirm any amendment.

On the day of the annual convention, a dinner shall be provided, at the expense of those members partaking of it. Delegates from other societies and invited guests shall be provided for under the direction of the Committee of Arrangements.

An invitation to the dinner may be given to such eminent persons as the President of the Society, or Anniversary Chairman, shall think proper to notice in this manner.

CHAPTER VIII.

Honorary Degrees and Honorary Membership.

Resolved, That the Committee on Honorary Degrees be directed to recommend none who have commenced the practice of medicine since the year 1815. *Passed, May, 1831.*

Resolved, That no member of this society shall be recommended to the President and Fellows of Yale College for the honorary degree of Doctor of Medicine until such member shall have been in the practice of medicine for a period of twenty-five years, at least, and no more than one shall be recommended from this State in any one year, and such degree shall be conferred solely on the ground of distinguished merit and honor of the individual. *The Committee on Honorary Degrees, in 1856, recommended the adoption of the above resolution, and the report of the committee was accepted.*

Resolved, That the names of candidates for the honorary degree of Doctor of Medicine and honorary membership be published in the proceedings of the Society, and be not acted upon for one year subsequent to the time such nominations are made. *Passed, May, 1860.*

CHAPTER IX.

Of Medical Students.

SECTION 1. Before any person can be admitted into the office of a physician, as a student of medicine, he shall furnish evidence of good moral character, and shall be examined by the preceptor and one of the Fellows of this Society; the examination to be upon the subjects of English education, and Greek and Latin languages. If found qualified he is to receive a certificate to that effect, and be enrolled as a regular student of medicine. *Passed, May, 1847.*

SEC. 2. The following certificate of studies shall be required of all candidates for examination for a degree:

I hereby certify that _____ has pursued the study of Medicine with me from _____ to _____, and and that he recited regularly on [here insert the branches pursued] during the above mentioned time.

_____, Physician.

SEC. 3. The taxes of the Fellows and dissertator *in attendance* at the Convention shall be abated. The Fellows of each county shall be a committee of abatement for that county.

SEC. 4. Each county meeting shall have power to examine and immediately expel any member notoriously in the practice of any form of quackery without any formal trial, the same to be ratified by the succeeding Convention, any by-laws to the contrary notwithstanding.

SEC. 5. That the several county meetings are hereby instructed to continue their investigations in relation to the manufacture, sale, recommendation, and use of nostrums or patent medicines, by their members, and to present for trial any member so offending.

SEC. 6. That the several county meetings be requested to investigate the subject of members of the Society consulting with irregular practitioners, and enforce the by-laws in such case made and provided.

SEC. 7. That this Society require of the several county meetings to dismiss all members who persistently refuse or neglect to pay their annual taxes. *Passed, May, 1860.*

WHEREAS, doubts have existed as to the construction of membership after absence from this State,

SEC. 8. *Resolved,* That the privileges and obligations of membership revert to a regular physician on returning to the State. *Passed, May, 1864.*

PRECEDENCE OF MOTIONS IN ORDER.

WHEN A QUESTION IS UNDER DEBATE.

[CUSHING.]

1. To adjourn.
 2. To lie on the table.
 3. The previous question.
 4. To postpone to a day certain.
 5. To commit.
 6. To amend.
 7. To postpone indefinitely.
 8. The main question.
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REPORTS OF COMMITTEES.

HOW TO DISPOSE OF THEM.

When a committee is ready to report, the *first question* is whether the assembly will *receive* the report.

If the assembly, either by formal vote, or by tacit consent, permits a report to be read, the report, by such permission, is *received*, and goes to the clerk for his files—that is to say, in parliamentary language, lies on the table.

The committee, by the reading of the report, is dissolved and *discharged*, and cannot again act without new power from the assembly.

The *report* having been *received*, as above indicated, lies on the table, and the matter may end at this point without further action being taken, or a word said.

But if the assembly wishes to discuss,* or take action on, any part or the whole of a report, it can do so as soon as the report is read, or at any subsequent time, upon motion properly seconded.

Whenever a report, or any part of it, is thus taken up, it may be treated and disposed of precisely as any other proposition,—it may be allowed to stand as it came from the committee, or it may be amended in its statement, reasoning, opinion, or in its resolutions or other propositions, if it contain such—any portion being taken separately, several portions together, or the whole at once.

In whatever way the report be treated, the final question on any portion, or on the whole, as the case may be, is on acceptance, and "*when accepted it is adopted*" (Cushing, p. 151, § 295) by the assembly, and becomes the statement, reasoning, opinion, resolution, or other act, as the case may be, of the assembly, the same as it would have been had it originated in the assembly itself without the intervention of a committee.

(Though the question may be properly put on acceptance of a statement of facts, reasoning, or opinion; on agreeing to resolutions or other similar propositions; on adopting the order, or on passing or coming to the vote recommended, etc.; all these phrases are only equivalent to acceptance, which comprehends them all.)

The points then always to be remembered are, that a report is *received* by being allowed to be read; and that the whole, or any part of it, *when accepted is adopted*.

If the above exposition, strictly in accordance with Cushing and correct parliamentary usage, were constantly kept in mind by presiding officers, the deliberations of our Societies would be greatly facilitated and much confusion avoided.

CODE OF ETHICS

OF THE

AMERICAN MEDICAL ASSOCIATION.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ARTICLE I.—DUTIES OF PHYSICIANS TO THEIR PATIENTS.

SECTION 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge depend on their skill, attention, and fidelity. They should study, also, in their deportment, to unite *tenderness* with *firmness*, and *condescension* with *authority*, so as to inspire the minds of their patients with gratitude, respect, and confidence.

SEC. 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits should be used with discretion and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by the physician, except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great that professional men have, under some circumstances, been protected in their observance of secrecy by courts of justice.

SEC. 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

SEC. 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself if absolutely necessary. This office, however, is so particularly alarming when executed by him that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned in their last moments. The life of a sick person may be shortened not only by the acts, but also by the words and manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

SEC. 5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty which is independent of and far superior to all pecuniary consideration.

SEC. 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

SEC. 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they are proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.—OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

SECTION 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease, and health for the welfare of those who avail themselves of their services, certainly have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants.

SEC. 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

SEC. 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits, and predispositions of those he attends is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is still of more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

SEC. 4. Patients should faithfully and unreservedly communicate to their physicians the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

SEC. 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as

relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

SEC. 6. The obedience of a patient to the prescription of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are apt to suppose that the rules prescribed for them may be disregarded, and the consequence but too often is a relapse. Patients should never allow themselves to take any medicine whatever that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

SEC. 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

SEC. 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

SEC. 9. Patients should always, when practicable, send for their physician in the morning before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical advisers unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

SEC. 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physi-

cian; for these are of such a character that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

ARTICLE I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.

SECTION 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty as a body, and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

SEC. 2. There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life of a fellow-creature.

SEC. 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or hand-bills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empiric, and are highly reprehensible in a regular physician.

ARTICLE II.—PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER.

SECTION 1. All practitioners of medicine, their wives, and their children, while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incom-

petent judge of his own case; and the natural anxiety and solicitude which he experiences at the death of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully afforded. Visits ought not, however, to be obtruded officiously, as such unasked civility may give rise to embarrassments, or interfere with that choice on which confidence depends. But if a distant member of the faculty, whose circumstances are affluent, requests attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed which the party receiving it would not wish to incur.

ARTICLE III.—THE DUTIES OF PHYSICIANS AS RESPECTS VICARIOUS OFFICES.

SECTION 1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and, when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglects his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ARTICLE IV.—THE DUTIES OF PHYSICIANS IN REGARD TO CONSULTATIONS.

SECTION 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this association, and who is in good moral and

professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation when it is requested by the patient. But no one can be considered a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

SEC. 2. In consultations, no rivalry or jealousy should be indulged. Candor, probity, and all due respect should be exercised toward the physician having the case in charge.

SEC. 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for a deliberation, and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

SEC. 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation, and the reason for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

SEC. 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emer-

gency, or when he has been called from considerable distance, in which latter case he may examine the patient and give his opinion in *writing* and *under seal*, to be delivered to his associate.

SEC. 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

SEC. 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

SEC. 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen that two physicians cannot agree in their views of the nature of a case and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and if circumstances prevent the adoption of such a course, it must be left to the patient to select the physician in whom he is most willing to confide. But as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation or participation in the management of the case.

SEC. 9. As circumstances sometimes occur to render *special consultations* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such case should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion of both time and attention, at least a double honorarium may be expected.

SEC. 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as can be consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any

of those extraordinary attentions or assiduities which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ARTICLE V.—DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE.

SECTION 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

SEC. 2. A physician, in his intercourse with a patient, under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

SEC. 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty, in the same illness, except in cases of sudden emergency or in consultation with the physician previously in attendance, or when the latter has relinquished the case or been regularly notified that his services are no longer desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success in the first stages of treatment affords no evidence of a lack of professional knowledge and skill.

SEC. 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

SEC. 6. It often happens in case of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may

deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and unless his further attendance be requested, should resign the case to the latter on his arrival.

SEC. 7. When a physician is called to the patient of another practitioner,* in consequence of the sickness or absence of the latter, he ought on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

SEC. 7. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no further directions unless it be expressly desired; and in this last case, to request an immediate consultation with the practitioner previously employed.

SEC. 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding in some degree the common funds for its support when fees are dispensed with which might justly be claimed.

SEC. 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the absence of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ARTICLE VI.—OF DIFFERENCES BETWEEN PHYSICIANS.

SECTION 1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court-medical*.

SEC. 2. A peculiar reserve must be maintained by physicians towards the public in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general

*The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.

society, neither the subject matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ARTICLE VII.—OF PECUNIARY ACKNOWLEDGMENTS.

Some general rules should be adopted by the faculty in every town or district relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will permit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ARTICLE I.—DUTIES OF THE PROFESSION TO THE PUBLIC.

SECTION 1. As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially pertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions, in relation to the medical police of towns, or drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

SEC. 2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice on subjects strictly medical, such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post mortem* examination, it is just, in consequence of time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

SEC. 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good office. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for

mutual benefit, for the insurance of lives, or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

SEC. 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and imposters. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ARTICLE II.—OBLIGATIONS OF THE PUBLIC TO PHYSICIANS.

SEC. 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumption of ignorance and empiricism, to afford every encouragement and facility for the acquisition of medical education, and no longer to allow the statute books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

PRESIDENTS OF THE CONNECTICUT MEDICAL SOCIETY,

*From its organization in 1792 to the present time, and a list of the
Fellows since 1875.*

PRESIDENTS.

1792. *Leverett Hubbard.	1861. *Josiah G. Beekwith.
1794. *Æneas Munson.	1863. Ebenezer K. Hunt.
1801. *James Potter.	1865. *Nathan B. Ives.
1803. *Thomas Mosely.	1866. Isaac G. Porter.
1804. *Jeremiah West.	1867. *Charles Woodward.
1807. *John R. Watrous.	1868. *Samuel B. Beresford.
1812. *Mason F. Cogswell.	1869. Henry Bronson.
1823. *Thomas Hubbard.	1870. Charles F. Sumner.
1827. *Eli Todd.	1871. Gurdon W. Russell.
1829. *John S. Peters.	1872. Henry W. Buel.
1832. *William Buel.	1873. *Ira Hutcheson.
1834. *Thomas Miner.	1874. Lowel Holbrook.
1837. *Silas Fuller.	1875. Pliny A. Jewett.
1841. *Elijah Middlebrook.	1876. A. W. Barrows.
1843. *Luther Ticknor.	1877. Robert Hubbard.
1846. *Archibald Welch.	1878. C. M. Carleton.
1849. *George Sumner.	1879. A. R. Goodrich.
1851. *Rufus Blakeman.	1880. G. L. Platt.
1853. *Richard Warner.	1881. William Deming.
1854. *William H. Cogswell.	1882. William G. Brownson.
1856. *Benjamin H. Catlin.	1883. E. B. Nye.
1858. Ashbel Woodward.	

VICE-PRESIDENTS.

1876. Robert Hubbard.	1880. William Deming.
1877. C. M. Carleton.	1881. William G. Brownson.
1878. A. R. Goodrich.	1882. E. B. Nye.
1879. G. L. Platt.	1883. B. N. Comings.

SECRETARIES.

1876-1883. C. W. Chamberlain. 1883. S. B. St. John.

TREASURERS.

1876-1883. F. D. Edgerton. 1882. E. P. Swasey.

VICE-PRESIDENTS *Ex-Officio*.

1876.	1877.	1878.	1879.
Charles Carrington, G. L. Platt, Isaac G. Porter, W. G. Brownson, L. Holbrook, B. B. North, A. W. Hough, A. R. Goodrich.	James C. Jackson, B. H. Catlin, Seth Smith, E. P. Bennett, Wm. A. Lewis, Wm. Deming, E. B. Nye, M. B. Bennett.	W. A. M. Wainwright, S. G. Hubbard, A. Woodward, E. P. Bennett, John Witter, Wm. Deming, G. C. H. Gilbert, F. L. Dickinson.	R. W. Griswold, M. C. White, E. C. Kinney, W. G. Brownson, E. Baldwin, R. S. Goodwin, R. W. Mathewson, S. G. Risley.
1880.	1881.	1882.	1883.
S. W. Rockwell, M. C. White, Ashbel Woodward, Samuel Hutchins, C. H. Bill, R. S. Goodwin, C. E. Hammond, Charles F. Sumner.	G. W. Sanford, A. H. Churchill, E. C. Kinney, William C. Wile, Henry W. Hough, Walter S. Munger, Rufus Baker, Stephen G. Risley.	William M. Hudson, N. Nickerson, E. C. Kinney, William C. Wile, John Witter, W. S. Munger, Miner C. Hazen, C. B. Newton.	George F. Lewis, M. N. Chamberlain, E. C. Kinney, George L. Porter, S. L. Hutchins, Willis J. Beach, A. B. Worthington, M. B. Bennett.

 FELLOWS.

HARTFORD COUNTY.

1876.	1877.	1878.	1879.
E. K. Hunt, J. O'Flaherty, S. R. Burnap, C. W. Chamberlain, G. R. Shepherd.	S. W. Rockwell, G. R. Shepherd, J. O'Flaherty, James Campbell, R. E. Ensign.	S. W. Rockwell, G. W. Russell, R. E. Ensign, N. Mayer, G. P. Davis.	L. S. Wilcox, G. P. Davis, E. B. Lyon, N. Mayer, J. N. Parker.
1880.	1881.	1882.	1883.
G. W. Russell, H. S. Fuller, E. B. Lyon, J. N. Parker, E. P. Swasey.	H. S. Fuller, E. Warner, E. P. Swasey, R. M. Griswold, G. W. Steadman.	Eli Warner, G. W. Steadman, George W. Avery, W. T. Bacon, George F. Lewis.	George W. Avery, W. T. Bacon, R. Strickland, H. E. Way, E. J. McKnight.

NEW HAVEN COUNTY.

1876.	1877.	1878.	1879.
S. C. Bartlett, W. L. Bradley, L. J. Sanford, B. H. Catlin, J. F. Barnett.	S. H. Bronson, B. F. Harrison, John Nicoll, S. D. Gilbert, C. H. Gaylord.	D. L. Daggett, A. H. Churchill, W. H. Carmalt, L. N. Beardsley, M. N. Chamberlain.	P. A. Jewett, S. G. Hubbard, N. Nickerson, S. D. Gilbert, E. L. Griggs.
1880.	1881.	1882.	1883.
L. J. Sanford, N. Nickerson, C. H. Pinney, S. H. Bronson, H. Fleischner.	W. H. Carmalt, R. B. Goodyear, E. B. Heady, L. J. Sanford, W. G. Alling.	W. H. Carmalt, A. E. Winchell, H. Davis, C. A. Lindsley, S. D. Gilbert.	W. H. Carmalt, W. H. Holmes, F. E. Beckwith, A. Beardsley, E. T. Bradstreet.

NEW LONDON COUNTY.

1876.	1877.	1878.	1879.
A. Woodward, L. S. Paddock, G. W. Harris, A. T. Nelson, W. S. C. Perkins.	Samuel Johnson, C. M. Carleton, S. L. Sprague, A. Woodward, F. N. Braman.	A. Woodward, C. N. Brayton, E. C. Kinney, F. N. Braman, L. S. Paddock.	F. G. Stanton, L. B. Almy, E. C. Kinney, W. M. Burchard, J. D. Nelson.
1880.	1881.	1882.	1883.
C. E. Brayton, C. M. Carleton, J. D. Nelson, F. A. Coates, George W. Harris.	L. S. Paddock, W. M. Burchard, F. N. Braman, A. Woodward, A. Peck.	E. D. Griffin, P. Cassidy, J. G. Stanton, F. N. Braman, A. Woodward.	L. S. Paddock, J. G. Stanton, F. N. Braman, S. L. Sprague, A. Woodward.

FAIRFIELD COUNTY.

1876.	1877.	1878.	1879.
N. E. Worden, C. W. Sheffrey, G. M. Teeple, E. Gregory, S. Lynes.	G. L. Bouton, James E. Barbour, G. F. Lewis, A. E. Emery, W. A. Lockwood.	J. G. Gregory, James E. Barbour, Robert Lander, N. E. Worden, G. A. Shelton.	E. J. Ward, W. C. Wile, W. C. Burke, Jr., N. E. Worden, C. H. Bill.
1880.	1881.	1882.	1883.
Wm. G. Brownson, A. S. Allen, W. H. Bunnell, F. J. Young, F. M. Wilson.	C. H. Bill, N. E. Worden, Wm. C. Wile, Wm. C. Burke, Jr., M. V. B. Dunbam.	G. L. Porter, J. C. Kendall, W. C. Bowers, George B. Bouton, C. H. Bill.	S. F. Delamater, Willis Cummings, George F. Lewis, J. G. Gregory, W. A. Lockwood.

WINDHAM COUNTY.

1876.	1877.	1878.	1879.
J. B. Whitcomb, John Witter, S. Hutchins, C. Hosford, Wm. A. Lewis.	W. A. Lewis, E. H. Davis, E. A. Hill, Lewis Williams, Elijah Baldwin.	J. B. Kent, T. M. Hills, John Witter, C. H. Rogers, C. J. Fox.	J. B. Kent, T. M. Hills, S. Hutchins, J. B. Whitcomb, C. J. Fox.
1880.	1881.	1882.	1883.
William A. Lewis, Lewis Williams, Lowell Holbrook, John Cotton, Thomas Graves.	Lowell Holbrook, C. J. Fox, W. H. Judson, R. Robinson, A. E. Darling.	R. Robinson, A. E. Darling, A. S. Leonard, O. B. Griggs, F. G. Sawtelle.	E. A. Hill, T. M. Hills, F. G. Sawtelle, J. B. Kent, Charles Gardiner.

LITCHFIELD COUNTY.

1876.	1877.	1878.	1879.
J. J. Newcomb, G. H. Miner, J. H. North, R. S. Goodwin, V. Buel.	W. W. Welch, H. M. Knight, J. W. Bidwell, H. E. Gates, W. S. Munger.	L. H. Wood, H. W. Buel, O. Brown, S. H. Huntington, T. G. Wright.	E. B. Heady, J. H. Stevens, Wm. Deming, T. S. Hanchett, W. J. Beach.
1880.	1881.	1882.	1883.
Wm. Deming, J. R. Sanford, J. J. Newcomb, B. S. Thompson, F. W. Brown.	R. S. Goodwin, J. B. Derrickson, Orlando Brown, W. J. Beach, G. H. Miner.	L. H. Wood, B. S. Thompson, J. W. Bidwell, Orlando Brown, R. S. Goodwin.	L. H. Wood, H. W. Shove, C. H. Gilbert, L. G. Ketchum, C. O. Belden.

MIDDLESEX COUNTY.

1876.	1877.	1878.	1879.
F. D. Edgerton, R. W. Mathewson, A. M. Snow.	George W. Burke. J. W. Alsop. E. Bidwell.	J. H. Grannis, M. C. Hazen, E. B. Nye.	I. Hutchinson, A. B. Worthington, G. C. H. Gilbert, S. W. Turner, C. E. Hammond.
1880.	1881.	1882.	1883.
Rufus Baker, W. B. Hallock, C. A. Sears, R. W. Mathewson, A. W. Bell.	D. A. Cleaveland. C. M. Hubbard, A. M. Shew, A. A. Hough, Albert Field.	J. H. Grannis, A. B. Worthington, E. B. Nye, C. E. Hammond, J. Olmstead.	Rufus Baker, Miner C. Iluzen, R. W. Mathewson, C. A. Sears, George W. Burke.

TOLLAND COUNTY.

1876.	1877.	1878.	1879.
G. H. Preston, S. G. Risley, C. B. Newton.	M. B. Bennett, G. H. Preston, J. La Pierre.	C. B. Newton, G. H. Preston, A. R. Goodrich.	S. G. Risley, J. A. Warren, Wm. L. Kelsey.
1880.	1881.	1882.	1883.
Wm. N. Clark, Henry S. Dean, F. S. Smith.	M. B. Bennett, F. S. Smith, E. P. Flint.	E. K. Leonard, Wm. L. Kelsey, M. B. Bennett.	E. P. Flint, A. R. Goodrich, S. G. Risley.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

W. A. M. Wainwright, 1878-1883.	H. S. Fuller, 1882-1883.
L. S. Wilcox, 1879-1881.	W. C. Wile, 1883.
W. L. Bradley, 1879-1880.	J. H. Grannis, 1883.
George F. Lewis, 1881-1883.	E. C. Kinney, 1883.

DEATHS FOR EIGHT YEARS.

1876.		1877.		1878.		1879.	
Lorenzo Marcy,	82	W. H. Coggs well,	78	Wm. Scott,	70	Charles L. Ives,	47
D. B. W. Camp,	71	Joel Canfield,	76	N. H. Byington,	68	E. A. Park,	62
C. W. Webb,	67	B. B. North,	72	Geo. A. Moody,	56	Wm. White,	67
E. M. Dunbar,	34	S. S. Noyes,	90	Geo. O. Sumner,	77	S. C. Bartlett,	40
		S. H. Lyman,	63	C. A. Gallagher,	43	T. D. Dougherty,	49
		Charles Hosford,	40	H. L. Wixon,	34	N. B. Hall,	51
		Geo. E. Perkins,	53	John Deacon,	50	Samuel Johnson,	74
		Daniel Poll,	46	A. J. Driggs,	75	Milton Bradford,	70
				J. D. Mears,	54	D. A. Hovey,	69
				Seth Smith,	55	Harvey Campbell,	85
				Freder'k Morgan,	87	Remus H. Fowler,	86
				Elijah Gregory,	45	A. White,	59
				George Dyer,	76	W. H. Richardson,	70
				Ralph Denning,	79		
				G. St. John,	73		
				B. D. McGuire,	29		
1880.		1881.		1882.		1883	
Edward Brace,	81	Ed. Bulkley, Jr.,	47	James C Jackson,	63	George B. Hawley,	71
B. H. Catlin,	78	Freder'k J. Fitch,	38	L. S. Wilcox,	55	W. H. Tremaine,	68
R. F. Stillman,	64	L. N. Beardsley,	66	Thomas Dutton,	79	F. F. Allen,	79
Henry Potter,	55	B. S. Roath,	70	S. H. Bronson,	36	George A. Hurlburt,	49
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