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PROCEEDINGS  
OF THE  
CONNECTICUT MEDICAL SOCIETY,  
1901.

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ONE HUNDRED AND NINTH  
ANNUAL CONVENTION,  
HELD AT  
HARTFORD, MAY 22<sup>D</sup> AND 23<sup>RD</sup>.

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PUBLISHED BY THE SOCIETY.

---

L. B. ALMY, M.D.,  
J. H. GRANNIS, M.D.,  
N. E. WORDIN, M.D.,  
*Publication Committee.*

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1901.

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

All communications intended for the Connecticut Medical Society must be addressed to N. E. Wordin, M.D., Bridgeport, Conn.

**The next Annual Meeting of the Connecticut Medical Society will be held in New Haven, May 28th and 29th, 1902.**

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OFFICERS OF THE SOCIETY.

1901—1902.

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PRESIDENT,  
JOHN H. GRANNIS, Old Saybrook.

VICE PRESIDENT,  
GOULD A. SHELTON, Shelton.

VICE PRESIDENTS, ex-officio.

GEORGE CLARY,  
HENRY L. SWAIN,  
CHARLES B. GRAVES,  
FRANKLIN P. CLARK,  
LAURA H. HILLS,  
JOHN C. KENDALL,  
HENRY S. NOBLE,  
FRANK L. SMITH,  
T. F. O'LAUGHLIN.

TREASURER,  
W. W. KNIGHT.

SECRETARY,  
N. E. WORDIN.

ASSISTANT SECRETARY,  
J. H. TOWNSEND.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

N. A. HOTCHKISS, E. K. ROOT,

E. P. FLINT.

## STANDING COMMITTEES.

---

### *Committee to Nominate Physician to the Retreat for the Insane.*

E. P. SWASEY, M.D., E. K. LEONARD, M.D.,  
JOHN B. KENT, M.D., FRANK K. HALLOCK, M.D.,  
SELDEN B. OVERLOCK, M.D.

### *Committee on Legislation.*

L. S. PADDOCK, M.D., E. F. PARSONS, M.D.,  
N. E. WORDIN, M.D.,  
E. J. McKNIGHT, M.D., Hartford County.  
C. S. RODMAN, M.D., New Haven County.  
F. N. BRAMAN, M.D., New London County.  
J. W. WRIGHT, M.D., Fairfield County.  
J. B. KENT, M.D., Windham County.  
R. S. GOODWIN, M.D., Litchfield County.  
FRANK K. HALLOCK, M.D., Middlesex County.  
C. B. NEWTON, M.D., Tolland County.

### *On Medical Examination.*

SAMUEL M. GARLICK, M.D., J. FRANCIS CALEF, M.D.,  
WALTER L. BARBER, M.D., CHARLES L. TUTTLE, M.D.,  
HORACE S. FULLER, M. D.

### *On Honorary Members and Degrees.*

H. L. SWAIN, M.D., S. B. ST. JOHN, M.D.,  
W. C. HAVEN, M.D.

### *Committee on Publication.*

JOHN H. GRANNIS, M.D., ex-officio.  
GOULD A. SHELTON, M.D., ex-officio.  
N. E. WORDIN, M.D., ex-officio.

### *Committee of Arrangements.*

F. H. WHEELER, M.D., Anniversary Chairman.  
F. W. WRIGHT, M.D.,  
B. A. CHENEY, M.D.



PROCEEDINGS  
OF THE  
CONNECTICUT MEDICAL SOCIETY,  
ONE HUNDRED AND NINTH ANNUAL MEETING.

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The President and Fellows of the Connecticut Medical Society met in the Hunt Memorial Building, Hartford, on Wednesday, the twenty-second of May, 1901, and were called to order promptly at 2 o'clock by the President, Dr. Ahny. The following is the list of Fellows:

FELLOWS, *ex officio*.

*President.*

LEONARD B. ALMY.

*Vice President.*

JOHN H. GRANNIS.

*Vice Presidents, ex officio.*

\*GEORGE CLARY,

\*HENRY L. SWAIN,

\*CHARLES B. GRAVES,

\*FRANKLIN P. CLARK,

\*LAURA H. HILLS,

\*JOHN C. KENDALL,

\*HENRY S. NOBLE,

\*T. F. O'LAUGHLIN.

*Treasurer.*

W. W. KNIGHT.

*Secretary.*

N. E. WORDIN.

*Assistant Secretary.*

H. S. MILES.

*Committee on Matters of Professional Interest in the State.*

W. G. MURPHY,

\*J. G. STANTON,

G. C. SEGUR.

---

\*Absent.

FELLOWS BY COUNTIES, ELECTED IN 1901.

---

*Hartford County.*

Charles E. Taft, Charles D. Alton,  
 Michael A. Bailey, Philo W. Street,  
 William R. Tinker.

*New Haven County.*

Gustavus Eliot, Charles S. Rodman,  
 †Frank H. Wheeler, J. P. C. Foster,  
 Edward P. Hall.

*New London County.*

William Witter, \*John G. Stanton,  
 George H. Jennings, \*Frederick H. Dart,  
 \*Elmer E. Douglass.

*Fairfield County.*

Watson E. Rice, \*George S. Ford,  
 \*W. S. Randall, George H. Noxon,  
 John W. Wright.

*Windham County.*

John B. Kent, Lowell Holbrook,  
 \*Robert C. White, Frank E. Guild,  
 \*Charles N. Allen.

*Litchfield County.*

Elias Pratt, W. M. S. Curtiss,  
 ‡E. H. Welch, W. S. Hulbert,  
 A. E. Cobb.

*Middlesex County.*

\*A. J. Campbell, Howard T. French,  
 James Murphy, Cushman A. Sears,  
 Frank K. Hallock.

*Tolland County.*

William C. Haven, William L. Higgins,  
 Cyrus B. Newton.

---

\*Absent.

†In place of W. J. Delaney.

‡In place of R. S. Goodwin.

The general attendance was very large.

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The President then read his

### ADDRESS TO THE FELLOWS.

FELLOWS OF THE CONNECTICUT MEDICAL SOCIETY,

*Gentlemen :—*

I am honored by your selection of myself to preside over your deliberations, and following the time honored custom, it is my privilege to acquaint you with the happenings of the past year, and it is my duty to offer to you such suggestions as to your action on various matters during the coming meeting, as may seem to me for the best interests both of the Society, and the profession.

Many of you remember that at one time it was proposed to amend our charter, so as to abolish this august body, and do the business of the Society in a sort of "town meeting" affair, by the whole membership of the Society, or such parts thereof, as might be present at the annual meeting. This was, after some very lively sessions, voted down, by a large majority of the Fellows, and to my mind, this was wisely done. So we to-day occupy the position of a "board of directors," which, though somewhat unwieldy, has rarely, if ever, made any grave errors in the management of our organization, either with regard to matters relative to the common weal, or to the honor of the medical profession.

Our worthy Secretary will present to the Society later the changes in our membership caused by death, resignation, or removal, and will also give you the names of those who join our ranks for the first time. The various biographers will tell you the salient features in the lives of those whose loss we mourn, who have "crossed the

great divide!" It remains for us to consider the various matters which will come before us, and act with the best judgment which we can bring to bear, on some weighty matters which we will have to decide to-day.

Firstly, as the parsons used to say, the powers of the President should be increased in so much that he be authorized to appoint such committees as may be necessary, and to fill vacancies in existing committees, when such occur.

This has been done by the President, but he has no warrant for his action, unless it be in the statement in the by-laws that "he shall perform such other duties as may be appropriate to his office." For instance, early last fall, the committee to revise the United States Pharmacopeia asked that our Society appoint a sub-committee in this State. I took the liberty of appointing Drs. C. A. Lindsley, Henry Fleischner, and O. T. Osborne. The character of the work done by this committee is shown by the following letter:

October, 31st, 1900.

*Dear Prof. Osborne:—*

It gives me great pleasure to acknowledge the receipt of your report. I cannot expect to get so scientific a report from all State Societies, but were it possible the strongest argument ever presented would be brought before the Revision Committee. I trust that you will accept for yourself and your colleagues upon the Committee my heartfelt thanks for your most valuable report and the assurance that your judicious and painstaking work is thoroughly appreciated. It contains precisely the information and advice which we desire.

Please inform your colleagues of this letter, and I hope that the State Society will also know how thoroughly the work of your Committee is appreciated.

Yours very truly,

R. W. WILCOX.

Soon after, I received a letter from the "National Association for the Study of Epilepsy, and the Care and Treatment of Epileptics," asking for a committee to be appointed to report on epilepsy in this State.

Again I exceeded my authority, and appointed Drs. Max Mailhouse, E. A. Down, and F. K. Hallock on such a committee. Their report you will receive later.

Dr. Mailhouse, of New Haven, found it necessary for him to resign from the State Examining Committee, and with the advice of the other members of the Committee, I nominated Dr. C. A. Tuttle, of New Haven, and the State Board of Health appointed him. By Dr. Storrs' untimely death, the Committee on Legislation suffered an almost irreparable loss, but Dr. McKnight, of Hartford, has filled efficiently the position of Chairman of that Committee, which has had much to do this winter, and they will tell you the results of their labors later. Finally, the Chairman of the "Committee on Matters of Professional Interest" found himself unable to perform his arduous duties, and I considered that to be a matter for the Nominating Committee, as I had done about as much unauthorized appointing as seemed best. Therefore the Chairman was requested to suggest a nomination, which I confirmed.

You will see, I think, without further examples, that some arrangement should be made whereby your President should not be so embarrassed.

Our books and archives were safely deposited in this building, under the care of Drs. George L. Porter, Max Mailhouse, C. A. Lindsley and F. T. Simpson, to whom our thanks should be given.

The re-organization of the New York State Medical Association, and the Vermont Medical Society, on lines very similar to our own, is, I think, extremely complimentary to our fathers in medicine, who formulated the organization of this Society.

The American Medical Association has in mind a plan of re-organization of a similar character. It is proposed to reduce the delegate body to about one hundred and fifty members, to be elected by the State Society in a ratio of one delegate to every five hundred members, plus the active and retiring presidents, and if this change meets the approval of this Society, the President of the American Medical Association requests that a memorial be formulated and sent to St. Paul.

I am informed that the Committee on Organization is to be composed of the present Presidents of the State Societies.

There has been received by this Society, a communication from Washington, D. C. asking the Society's endorsement of a project to establish in the Department of the Interior, a Psycho-Physical Laboratory for Medico Sociological purposes.

The idea is endorsed by many eminent specialists and educators, and, as we need all possible information in the study of mankind, it would seem wise to give it the endorsement of this Society.

The most important matter which is to come before us to-day, is to take action on the suggestion embodied in the address of my predecessor, with regard to an amendment to our by-laws, whereby two nominations shall be made for Vice-President instead of one as heretofore. This amendment has been offered, in order to obviate the manifest injustice of allowing a county with seventeen members to have a President once in eight years, while Hartford and New Haven Counties, who have together half the membership of the Society, are only allowed the same privilege. In attempting to right this condition of things, we must go slowly, carefully, and if we can, without prejudice.

Will an amendment, as suggested, do what it is intended to do? I think not. The power is in the hands of the Nominating Committee, one from each county.

There are five members from the small counties to three from the large ones, and there is no reason why the two nominees should not be made from the smaller counties, as well as from the larger.

In the meeting of the Fellows to act upon such nominations, the larger counties are overwhelmingly in the minority, and I am unable to see how the double nomination is to benefit them. I therefore suggest, that the proposed amendment, not being calculated to accomplish its purpose, be tabled indefinitely:

Let us see if anything better offers itself. To my mind, there are two ways of arriving at the desired goal; one very simple, the other more complicated. First: let the Fellows express themselves, that in their opinion, the custom, hallowed by the usage of many years, of giving each county in rotation the Presidency of the Society, will be more honored in the breach than in the observance; and in its place let the counties with the larger membership have their fair share of the honors. This can be done by an appeal to the sense of justice of the Fellows, without any amendment whatever.

The other method would involve a radical change in our organization. We might follow the example of the New York Medical Association and the Vermont Medical Society and re-organize our Board of Fellows, allowing as New York does, one Fellow to every ten members, or parts thereof, and have one or two Fellows from each county on the Nominating Committee. That would be a perfectly fair way of giving the larger counties more control, and if the nominations were not satisfactory, they could be voted down by the Fellows. But we have been looking at the matter from the standpoint of New Haven and Hartford counties; let us see how it looks from the side of the small counties, one of which I have the honor to represent.

Under the re-organization, they would be in much the same position, that they would have been under the

change in the Charter proposed some years ago. The re-distribution would be as follows:

Hartford, . . . . .	16	Now 5
New Haven, . . . . .	16	" 5
Fairfield, . . . . .	12	" 5
New London, . . . . .	5	" 5
Windham, . . . . .	4	" 5
Litchfield, . . . . .	6	" 5
Middlesex, . . . . .	5	" 5
Tolland, . . . . .	2	" 3

As you can see this gives the two large counties a majority, and with the aid of the twelve Fellows from the next larger county, they would have absolute control. It would seem best to think it over carefully, before deciding to reorganize on that basis.

It is rather too much to expect the five small counties deliberately to vote away all of their power, even though it might seem just, for as David Hamm says, "I guess that there's about as much human nature in some folks as there is in others, and some times more." My first idea seems the more practicable, for the five little ones, will, I think, see the justice of changing our method of nominating by counties in rotation, and would be willing to give the big ones something like a fair chance of the power. I would therefore suggest that a committee be appointed for example, to look carefully into the matter, and make a report at the next annual meeting, with such suggestions as they may deem of service to us, with regard to representation.

A few days ago, the Society received from the President and Fellows of Yale University, an invitation to be represented at the Bi-Centennial Celebration of the founding of Yale College.

It would seem fitting that the Society take some notice officially of the invitation, and send a committee to represent us on that occasion. I would suggest that the



Nominating Committee name a committee of three or five for such purpose.

And now, thanking you again for the honor conferred upon me, and for your kindness in listening to my many suggestions, I declare this the One Hundred and Ninth meeting of the Connecticut Medical Society open for the transaction of business.

The regular Committees were then announced, as follows:

*On Credentials.*

N. E. Wordin, M. A. Bailey.

*On Unfinished Business.*

Lowell Holbrook, Henry L. Swain,  
R. S. Goodwin.

*On County Resolves.*

C. S. Rodman, C. B. Graves,  
C. B. Newton.

*To Nominate Essayists on the Progress of Medicine and Surgery.*

George Clary, J. W. Wright,  
F. K. Hallock.

*Auditing.*

G. H. Jennings, P. W. Street.

REPORTS OF COMMITTEES WERE CALLED FOR.

The Committee on Unfinished Business made no report.

The report from the Committee on National Legislation was presented by Dr. C. S. Rodman, who was elected Delegate last year.

REPORT OF COMMITTEE ON NATIONAL LEGISLATION OF THE  
AMERICAN MEDICAL ASSOCIATION.

Two conferences with the Committee on National Legislation of the American Medical Association have been held at Washington; the first, May first and second, 1900,

and the second, February twentieth and twenty-first, 1901. It has been my good fortune to attend both of these meetings; the second only, however, as the representative of the Connecticut Medical Society. The work has been so largely that of organization that the two cannot well be considered separately, although for details of the first conference reference may be made to Dr. Eliot's report in our last Proceedings, and to the published minutes in the Journal of the Association of June sixteenth, 1900.

In accordance with the resolution adopted at the annual meeting of the American Medical Association held at Columbus, in 1899, the President appointed as a Committee on National Legislation Drs. H. L. E. Johnson, of Washington, William H. Welch, of Baltimore, and William L. Rodman, of Philadelphia.

By this Committee the following recommendations were submitted to the American Medical Association at its meeting in 1900 at Atlantic City.

Your Committee is of the opinion that an annual conference at Washington, D. C., to consider pending National and State Medical legislation is desirable, and that it will tend to awaken interest in National medical affairs and will give the legislators a medium for better understanding the wishes of the country at large with respect to medical questions.

We recommend that the American Medical Association request affiliating Medical Societies of the several States and Territories to provide in their constitutions for the appointment of a State Legislative Committee, whose special duty it shall be to consider all medical legislation arising in the State Legislatures and in the National Congress, and advise their constituent members thereon; further, the appointment of one member and an alternate to represent their Society when called by your Committee on National Legislation to a general conference in Washington, each Society paying out of its

treasury the expenses of such delegate or alternate to said conference.

We suggest that such Committee shall be carefully selected with respect to special individual qualifications for such service, and that the tenure of office should depend on individual fitness for the position.

We recommend the adoption of pending amendments to the Constitution of the American Medical Association, providing for a Standing Committee on National Legislation, and we recommend that the Board of Trustees of the Association be empowered to make proper appropriations for the legitimate expenses of said Committee.

We further recommend that your honorable Association approve the various measures endorsed by the delegates to the conference at their meeting in Washington, if after due consideration you consider it just and wise to do so.

At the same meeting of the American Medical Association the following amendment to the Constitution was adopted:

Section 3. **STANDING COMMITTEES:** The Committee on Legislation shall consist of three members, to be appointed annually by the President, one of whom shall be a resident of Washington, one of Maryland, and one of Pennsylvania. It shall be the duty of this Committee to represent before Congress the wishes of this Association regarding the pending medical and sanitary legislation. This Committee shall also invite to an annual conference, to be held at Washington, one delegate each from the Army Medical Service, the Navy Medical Service, the Marine Hospital Service, the United States Bureau of Animal Industry, and from each State Society in affiliation with the American Medical Association; such conference to consider questions of National medical and sanitary legislation, and report to their representative bodies for action. This body shall have power to act ad interim when necessity requires.

The American Medical Association also endorsed the work of the Legislative Committee, approving the following bills which they had been urging before Congress:

(a) H. R. 4483 and S. 4274, regarding an "Increase in the Medical Department of the Army."

(b) Bill providing for the appointment of assistant surgeons of volunteers.

(c) Bill for the relief of acting assistant surgeons of the United States Army.

(d) H. R. 11139 and S. 4171, to protect the Southern coast and therefore the National quarantine service.

(e) That the S. 34 bill for the "further prevention of cruelty to animals in the District of Columbia," in reference to antivivisection, be opposed.

(f) S. 559 report calendar No. 427, in regard to the pollution of Potomac water.

The following are the more important matters reported or considered at the conference in February of the present year.

**THE ANTIVIVISECTION BILL:** After adjournment of the first conference, a special Committee appointed for this purpose addressed a remonstrance to the Senate and House of Representatives against the passage of Senate Bill 34, known as "The Antivivisection Bill," which was submitted to the Senate by the President pro tempore, Senator Frye. The supporters of this bill have apparently become discouraged, and for the present, at least, abandoned it, a result upon which our profession is to be congratulated.

**ARMY REORGANIZATION BILL:** Announcement was made of the passage of this bill, S. 4300, and of the unavailing effort to secure amendment in the interest of our profession, i.e., while providing for an army of a hundred thousand men to secure a larger number of appointments of the higher grades. The law, for example, provides for sixty surgeons with rank of major, and for

two hundred and forty with rank of captain and first lieutenant. While no present injustice is done to those in the service, unless further legislation is ultimately secured, those now entering the army as assistant surgeons will wait twenty-five years before reaching the rank of major, and this, although no less time is required for a medical than for a military education. The bill provides for no commissions for contract surgeons, no matter how meritorious their service. The interests of medical men who enter the army, or in time of stress serve the country, will call for amendment of this law. The history of the efforts on the part of the Legislative Committee and members of the conference cannot be detailed here, but constitute a plea for organization on the part of our profession.

AN ACT GRANTING ADDITIONAL QUARANTINE POWERS, AND IMPOSING ADDITIONAL DUTIES UPON THE MARINE HOSPITAL SERVICE: This amendment to the law of 1893, was the subject of a more favorable report. It appears that pretty free communication has been established between Porto Rico and Cuba and our Southern coast. Vessels come within the three mile limit, nominally as fishing smacks, in reality to smuggle rum and tobacco, and often land a sick man. The bill, which especially appealed to our senators and representatives from the South, enables the quarantine officers for the first time to define the anchorage, to administer oaths, and to collect fines for concealment of sickness by lien on the vessel. The following letter was drafted and presented to the Committee on Interstate and Foreign Commerce, and a personal interview was obtained. It may be added that the bill became a law ten days after the adjournment of the conference:

“Washington, D. C., February 21, 1901.

“At the annual meeting of the National Legislative Conference of the American Medical Association and Af-

filiated State Medical Societies, held at the Arlington, February 20-21, the following resolution was adopted, and Dr. L. B. Tuckerman, of Cleveland, Ohio, was appointed a special committee to present the same to the Committee of the House. The resolution is as follows:

“Resolved, That this Conference urge the immediate passage of S. 4171, which has already passed the Senate and is now pending in the House for the reason that the dangerous loopholes in the present quarantine law will occasion a serious menace to the public health before another Congress can meet.”

On motion of Prof. Welch, the following resolution was adopted:

“It is moved that the Chairman of this Committee send to each State Medical Society a communication stating the character of organization and the purposes of this conference, and advising each Society to conform with the action of the American Medical Association, requesting the appointment of two members, a delegate and an alternate, as a State Committee on National Legislation to represent the State Society in this conference and to co-operate with the National Committee. Each State Society is requested to send to the Chairman of the National Committee the names and addresses of the local committee.”

A committee on State Organization was appointed, Dr. C. R. Shinault, of Arkansas, Chairman. A committee was also appointed to Study the Question of Uniform Medical Legislation, on the basis of Uniform Medical Education; Dr. Emil Amberg, of Michigan, Chairman.

It is very probable that the results so far as legislation is concerned reached by these conferences, might have been secured by individual effort. Nevertheless, organization is a stimulus to such effort. No one however eminent appears before senators and representatives with any less prestige because he represents the profession of the country or of his State.

Several minor matters were presented wherein it appeared that enactments inimical to the Association and to the profession had been averted through the exertion of the members. Loyalty to the American Medical Association suggests the duty of amending our Constitution in the manner requested.

AMENDMENTS TO THE BY-LAWS OF THE CONNECTICUT MEDICAL SOCIETY OFFERED MAY 22<sup>ND</sup>, 1901, IN ACCORDANCE WITH THE ACTION OF THE AMERICAN MEDICAL ASSOCIATION.

To amend Chapter II, Sec. 1, in fourth line by insertion after State, of words, "Committee on National Legislation."

To amend Chapter II, Sec. 9, by striking out the first sentence and substituting "the Secretary of the Society and the Committee on National Legislation shall hold their respective offices until others be elected in their places."

To amend Chapter II, Sec. 8, by inserting in third line after State, of the words "and Committee on National Legislation."

C. S. RODMAN.

The report was received.

Dr. Foster reported concerning the Recommendations in the President's Address.

The President suggests the appointment of a Committee to make changes in the By-Laws. Our Society is old and has grown out of the rules which governed it in the past. There is a strong feeling for a change in that portion of the State represented by New Haven. The members in my city feel regarding our position in the State Society something as they do with the Representatives in the Legislature. It would be better for every man to stand on his own feet and if he gets anything let him get it because of what he is and not because he belongs to some County or other.

In regard to the appointment of Committees, the power of the President should be extended; also a special Committee should be appointed to consider the other suggestions made.

The report was received.

Dr. O. T. Osborne made a summary of the report of his Committee.

The Committee appointed by the President of the Connecticut Medical Society to recommend changes in the United States Pharmacopeia sent the results of their work to Dr. R. W. Wilcox, of New York, who is the Secretary of the Revision Committee.

The report was divided under six heads, as follows:

1st. That we believe that the size of the pharmacopeia should not be increased year by year, but as fast as new drugs were added, those found useless, or but little used, should be dropped, believing that the pharmacopeia should be kept, not as a reference book, but as an up-to-date and active means of communication between the physician and the pharmacist.

2nd. We believe that many preparations in the pharmacopeia containing a large number of ingredients, some of which are useless, could be simplified without affecting their efficiency, and hence should be simplified.

3rd. We recommend to the Committee on Revision a list of drugs which could well be omitted from the pharmacopeia of 1900.

4th. We suggested that of certain drugs prepared from more than one part of a plant the best should be selected, and it only made official.

5th. We recommend to the Committee a list of drugs as valuable additions to the pharmacopeia of 1900.

6th. We suggested that certain drugs be added to the pharmacopeia under some proper chemical title, but not under their patented names.

Respectfully submitted,

OLIVER T. OSBORNE,

Secretary of Committee.



Dr. Mailhouse read the

REPORT OF THE CONNECTICUT COMMITTEE OF THE NATIONAL  
ASSOCIATION FOR THE STUDY OF EPILEPSY.

Your Committee appointed by the President for the purpose of ascertaining the number and condition of the Epileptics in this State have completed their labors and beg leave to present to you the accompanying report.

For the purpose of ascertaining the necessary facts a copy of the appended circular was sent to every practitioner in the State, regular, homeopathic, eclectic and irregular whose name appeared in the State Manual, as well as to all such institutions, public and private, as would be likely to contain subjects of our inquiry. As a consequence there were about nineteen hundred of these circulars sent out.

In the returns, duplication of cases was avoided through the nature of the statistics obtained in each individual case, particularly by means of the age and sex.

The total number of epileptics reported, namely, 542, includes nine who are non-residents, thus leaving a net total of 533 as belonging to our population. In our opinion, however, this should be considered a minimum, as it ought to be increased materially by unreported cases under the care of physicians who through neglect or indifference failed to send returns. Furthermore, with very few exceptions, the cases reported are such as are patent to every one, cases attended by convulsions; and if cases of Petit Mal, Psychic Equivalents, etc., etc., were recognized and reported, the total would be considerably increased. However, for the purpose of this inquiry, namely, for the enlightenment of the public, both professional and lay, and as a basis for future proceedings, the figures as given here will doubtless suffice.

Taking the net total as above given one is at once struck by the large number in public institutions, namely, 224 or 42 per cent. Of these 121 or 22 7-10 per cent. of

all, are in asylums for insane; 9 or less than 2 per cent. in the Soldiers' Home; 4 or less than 1 per cent. in homes for incurables; 47 or 9 per cent. at the Home for Feeble-Minded at Lakeville; 9 or less than 2 per cent. in Sanitaria; 3 in jails and 30 or 5 6-10 per cent. in almshouses, making the above total of 224 individuals in this State who are so situated as to be not only incapacitated for self-support, from the point of view of their ailment, but also demanding the services of a considerable number of other persons for their care and treatment. Furthermore, one gathers from the above tables that two hundred and fifteen of these are public charges. How many of these latter have an earning capacity of fifty per cent. or more cannot be easily determined; probably much less than one-half.

The preponderance of males over females in the above statistics, namely, 315 of the former to 227 of the latter is rather striking inasmuch as works on neurology state that the sexes are equally affected.

When we come to consider the capacity for self-support of those who are the subjects of this inquiry, it becomes a matter of interest not only to the physician but especially to the economist and hence to the State. There are but 114 or 21 per cent. who are fully capable of self-support and in addition 51 or nearly 10 per cent. who can earn as much as half of their necessary support. Ninety-seven or nearly 18 per cent. earn less than one-half of what is required to support them and 215 or 40 per cent. are totally dependent. The balance, 63 in number, or  $10\frac{1}{2}$  per cent., are under fourteen years of age, i.e., children who, by law, are required to attend school, not yet wage-earners, and of these twenty-one are feeble-minded.

The returns tell us that there are 128 adult epileptics insane, or 24 per cent.; and nearly as many, 125, feeble-minded; making a total of 253, or 48 per cent.; adding the 21 feeble-minded children, gives us a total of 273 individuals requiring special care and treatment.

There are 44 sane children among the 542 cases reported. A review of what has been said, shows that there are at present within the State, many subjects of epilepsy who are placed in such surroundings as to enable them to obtain but little of what is best for their comfort and the amelioration of their condition. The time of many is rendered unproductive to themselves and to the community and many who, owing to their environment have and will become public charges, might, if properly handled, become more or less active workers toward improving their condition.

In its reports for the years 1897-1898-1899-1900, the Connecticut State Board of Charities made recommendations to the Legislature for the establishment and maintenance of a separate institution for epileptics upon the colony or village plan.

In the opinion of the Board of Charities, "It would be especially fitting if a separate cottage department could be established—for the care of all epileptics in the State who may need restraining and corrective influences of a specialized form of treatment. The so-called colony plan by which separate departments are provided for teachable imbeciles, epileptics, and custodial cases, is believed to be most effective in giving to each class the treatment best fitted for its needs, and in accomplishing the greatest measure of preventive and positive service."

It is evident to those who have made but meagre inquiry into the subject, that the epileptic child should not be placed in the public schools, and that some means for his tuition must be provided. The colony or village system provides for the care and instruction of both children and adults; and this part of the problem appears to have found its solution.

The establishment of a colony will not minimize the excellent methods in operation in Lakeville in this State, for this school has a special class of cases to deal with,

namely, imbeciles; whereas the system under review is comprehensive in its scope, including all classes of epileptics from the sane and self-supporting, to the demented and totally dependent.

While your Committee has endeavored to cover the ground as thoroughly as the circular form of inquiry would admit, it is evident that some cases must inevitably have been overlooked. Such oversight, results from the following circumstances. The physician recognizing the condition as "incurable," has little to offer in the way, of treatment, in addition to his prescription given as an anti-convulsive, or possibly a tonic or reconstructive coincident with this.

The patients renew their prescriptions as occasion requires, without further medical advice, and after a variable time the cases are lost sight of by the physician, and fail to become recorded when the census of these cases is attempted.

It is a matter for regret that cases of the epileptic equivalent or mental epilepsy, are not generally recognized; for they should be included in the census of epileptics, inasmuch as they terminate eventually in the regular form of the disease.

Referring to the figures, we observe that out of the total number in the State, less than one-half, or forty-two per cent., are under institutional oversight.

Our Committee is convinced that the total number in this report does not represent the true state of affairs, for the reason that epileptics as a class have not been public charges in the sense that the insane have; and, doubtless, there exists a reluctance on the part of the family, and the attending physician, through motives of sentiment or diplomacy, to acknowledge the existence of this terrible malady.

In those States in which the care of this class of cases has been most systematically carried out, it has been found that the ratio of one epileptic to every six or seven

hundred of the general population is as nearly correct as the present system of inquiry is capable of securing.

Using the above statistical ratios, Connecticut would be credited with from thirteen to fifteen hundred epileptics of all classes. While this appears rather startling, it must be remembered that it is the percentage in other States, and the country at large, which latter shows an aggregate of more than one hundred thousand cases; and as Connecticut has its proportionate number of cases in other forms of disease, and contains a heterogeneous population similar to that of other States, the percentage computation as given would appear to be correct. With the number of cases sent in from various parts of the State as a basis from which to make a reasonable deduction, your committee estimates the total epileptic population of Connecticut at about one thousand cases.

The following table is incorporated for the purposes of reference, also to show the ground covered in its preparation.

In conclusion it may be stated that while your Committee realizes that there is an apparent lack of interest in this class of cases, and the response to the circulars was not as complete as could reasonably be expected, there is a matter upon which the Committee felicitates itself, and that is to the effect that the attention of the profession and laity has been directed into channels through which a proper appreciation of the status of the epileptic and his environment in this State may be obtained; and expresses the hope that the resulting investigations will find their full fruition in the discovery of the solution of, perhaps, the most perplexing problem in cerebral dynamics.

Hartford, Conn., May 1, 1901.

STATISTICS OF THE EPILEPTICS OF CONNECTICUT.

Total number reported, ..... 542

Number reported by general practitioners, . . . .	309
“ “ “ Asylums for Insane, . . . .	121
“ “ “ Soldiers' Home, . . . .	9
“ “ “ Home for Incurables, . . . .	4
“ “ “ Home at Lakeville, . . . .	47
“ “ “ Reform School, . . . . .	1
“ “ “ Sanatoria, . . . . .	9
“ “ “ Jails, . . . . .	3
“ “ “ Almhouses, . . . . .	30
“ “ “ As non-residents of State, . . . .	9
	— 542

## SEX.

Male adults, . . . . .	278
Female adults, . . . . .	199
Male children under 14 years, . . . . .	37
Female children under 14 years, . . . . .	28
	— 542

## DEGREE OF CAPACITY FOR SELF SUPPORT—ADULTS.

Full capacity, . . . . .	114
More than half, . . . . .	51
Less than half, . . . . .	97
Totally dependent, . . . . .	215

## MENTAL CONDITION.

Adults	{	Sane, . . . . .	224
		Feeble minded, . . . . .	125
		Insane, . . . . .	128
Children	{	Sane, . . . . .	44
		Feeble minded, . . . . .	21

MAX MAILHOUSE,  
FRANK K. HALLOCK,  
EDWIN A. DOWN,  
Committee.

The report was accepted and ordered printed.

Dr. J. W. Wright—This, I understand, is only a preliminary report. The Committee should be continued

and some method provided for the care of these epileptics, such report to be made at the next meeting.

Dr. Higgins approved of this suggestion. He seconded the motion and stated that since he answered the questions of the Committee he had found five more epileptics. Other members might do the same and thus the work would be increased by continuing the Committee.

The motion was passed and the Committee continued.

It was moved and adopted that the Society accept the invitation of the President and Fellows of Yale University to be represented at the celebration of their bi-centennial anniversary and that the President appoint such Committee.

Dr. E. J. McKnight, of Hartford; Dr. Gustavus Eliot, of New Haven; Dr. Henry L. Hammond, of Killingly, were subsequently named as such Committee.

As further carrying out the suggestions of the President as given in his Address it was voted that the President be empowered to appoint such Committees as may be needed from time to time and also to fill vacancies in Committees which may arise during the year.

Dr. Howe offered an amendment to Chapter VII, Section 3 of the By-Laws:

That the Annual Dinner be furnished free to every member of the Society; that the Treasurer be instructed to pay for the same upon the order of the Anniversary Committee; that the tax be increased by so much as is necessary to accomplish the same.

Dr. Taft remarked that criticism is frequently made as to the order of exercises at our meetings—that the Program is loaded up with papers which have been read before at County Associations. We ought to do as some other Societies—select some one or more topics for consideration and then get some prominent or well known men to write upon and discuss them.

Dr. Segur—Many little things are constantly coming

up concerning the By-Laws. He suggests that copies of the By-Laws should be sent out to the members of the Society. The rules have not been revised since 1892. The New York State Medical Association in reorganizing their Society chose ours as their model. That certainly was complimentary to us. It is desirable to keep our Society as a model and it would be judicious to have a Committee on Revision of the By-Laws which should report at our next annual meeting.

Our Committee on Matters of Professional Interest in the State should be different. Often times now the work is done by one man. It does not show the condition of medical affairs throughout the State. We all read the medical periodicals and we can get a better resume from them of the progress of medicine and surgery during the year than we can from a paper read.

Moved, therefore, that a Committee be appointed of one from each County, on Revision of the By-Laws, to report at the next meeting.

Dr. Eliot—There is a good deal of talk about making the meetings more useful and practical. Papers are read and not discussed. Papers are read which have been read before.

He amended the motion so that the President should appoint a Committee of three to consider how to make the meetings of more scientific interest and to change the By-Laws according to their own ideas. It would be better to have the Committee do it in this way than to have the primary object of the Committee the changing of the By-Laws, giving notice beforehand that they would suggest changes.

Dr. Segur accepted the amendment, which was adopted. The President named as the Committee:

Dr. G. C. Segur, Dr. R. W. Kimball, Dr. G. L. Porter.

Dr. J. W. Wright for the Committee to Nominate Essayists on the Progress of Medicine and Surgery, named



Doctors E. K. Loveland and J. C. Lynch for Medicine;  
 Doctors N. R. Hotchkiss and A. G. Cooke for Surgery.  
 Dr. Knight then made the

## REPORT OF THE TREASURER.

As Treasurer, I would respectfully present the following report of the finances of the Society for the year ended May 22, 1901:

## RECEIPTS.

Balance from old account,.....	\$332 32
Cash received from taxes collected by County Clerks:	
Hartford County, .....	\$244 80
New Haven County, .....	327 60
Fairfield County, .....	172 80
New London County, .....	55 80
Middlesex County, .....	72 00
Windham County, .....	79 20
Litchfield County, .....	82 00
Tolland County, .....	21 60
	<hr/>
Total, .....	1,055 80
	<hr/>
Total receipts, .....	\$1,388 12
Excess of expenses over receipts,	16 12
	<hr/>
	\$1,404 24

## EXPENSES.

Proceedings, .....	\$1,032 62
Printing and stationery, .....	78 25
Postage, .....	31 94
Delegate to meeting of Committee on National Legislation, ....	25 00
Expenses of Committee on Matters of Pro- fessional Interest, .....	36 87
Removal of Library to Hartford, .....	10 26

Salary of Secretary, .....	150 00
Expenses of Secretary, .....	14 30
Salary of Treasurer, .....	25 00
	<hr/>
	\$1,404 24

## ARREARS IN TAX OF 1900.

Hartford County, .....	\$20 00
New Haven County, .....	50 00
Fairfield County, .....	84 00
New London County, .....	38 00
Middlesex County, .....	Nothing
Windham County, .....	14 00
Litchfield County, .....	20 00
Tolland County, .....	Nothing
	<hr/>

Total amount in arrears, ..... \$226 00

The Treasurer regrets to report the deficit of \$16.12. As the Society started the year with a balance of cash on hand of \$332.32 this shows that the expenses have exceeded the ordinary annual income by nearly \$350. This has not been due to any diminution in the efforts of the County Clerks, since the taxes in arrears are \$30 less than last year, but, mainly, as a result of the increased expense attending the printing of the Proceedings which for some years has been a growing volume.

As the County Clerks find it impracticable to collect much of the tax before the Fall meetings there should be a balance of cash on hand at the time of the Society's meeting, of at least \$400, in order that the Treasurer may be able to pay such small bills as come in after the meeting and at least a part of the bill for printing the Proceedings when it comes due in the Summer.

For this reason I would recommend that the tax for the coming year be made \$3, an increase of \$1 over the past year.

Respectfully presented,

W. W. KNIGHT, Treasurer.

Which was referred to the Auditing Committee.

## THE STANDING COMMITTEES

coming next in the order of exercises, Dr. Fuller reported from the Committee to Nominate Physicians to the Retreat for the Insane, that there had been no business for the Committee to do.

Dr. McKnight reported for the Committee on Legislation.

## REPORT OF THE COMMITTEE ON LEGISLATION.

Hartford, Conn., May 22, 1901.

*To the President and Fellows of the Connecticut Medical Society :*

*Gentlemen :—*

Our record begins with the appointment in July last, by the President, of Dr. Everett J. McKnight of Hartford, as Chairman of the Committee, that position having been made vacant by the death of Dr. Storrs.

I should be very negligent of my duty if I allowed this opportunity to pass without calling attention to the debt we as a Society, and all those interested in a higher standard of medical education in this State, owe to Dr. Storrs. No one knows better than the writer that the existence of a successful and, in the main, satisfactory law regulating the practice of medicine in this State, is very largely due to his personal efforts and I assure you that his leadership has been greatly missed during the past year.

Your Committee has held three meetings during the year and has endeavored to secure legislation upon the matters referred to it at the last annual meeting of the Society, which were: The establishment by the State of a Hospital for Consumptives, and certain changes in the Medical Practice Act in accordance with suggestions of the Committee on Examination, to be hereinafter considered.

A bill providing for the establishment of a State Hospi-

tal for Consumptives was prepared by Dr. Elias Pratt, of Torrington, which met with the approval of the entire Committee and was subsequently introduced in the General Assembly by the above named gentlemen, as House Bill, No. 237. Senator Bree, of New Haven, had previously introduced a bill covering the same matters and was of great assistance to us before the Committee on Humane Institutions, to which both bills were referred.

The measure was favorably considered by that Committee which requested Senator Bree and Dr. Pratt to draw up a substitute embodying the best points of both bills, which was done and the same reported upon favorably and referred to the Committee on Appropriations.

Everything seemed favorable until the hearing before that Committee was reached, when certain members of this Society appeared in opposition advising that the appropriation be distributed among existing institutions.

The condition of the finances of the State, as shown by the statement of the House Chairman of the Appropriations Committee yesterday, together with the opposition above mentioned, make us feel a little uncertain about the outcome of the Consumptives' Hospital Bill.

The recommendations of the Committee on Examination, which this Committee was instructed to carry out were:

"First.—A single State Board, appointed by the Governor, after recommendation by the three State Societies.

"Second.—A stated amount for the examination fee.

"Third.—Stated times for the examinations.

"Fourth.—Ability to issue certificates and conduct examinations independent of the State Board of Health.

"Fifth.—Ability to hold reciprocal relations in the matter of granting certificates, with other State Boards.

"Sixth.—The withdrawal of license after conviction in criminal courts.

“Seventh.—The admission to practice, without examination, of all persons who have passed the United States Army and Navy Board.

“Eighth.—The admission to examination of those only who can present certificates of graduation from legally incorporated medical institutions.”

Ex-President C. S. Rodman, who, of all the Committee, was most familiar with these matters, elaborated a new Medical Practice Act which was generally favored by the Committee and, two members dissenting, was ordered introduced after consultation had been had with representatives of the other chartered Medical Societies.

Unfortunately, the hearing on this bill was precipitated upon us, without sufficient preparation and met with considerable opposition, mainly from members of the other societies. It was finally left for the Chairman of the Legislative Committees of the Homeopathic and Regular Societies to try to come to an agreement, the main point at issue being the composition of the Board of Registration in Medicine. After several meetings, in which our old friend and honorary member, Mr. Charles E. Gross, was of valuable assistance, a measure was agreed upon which seemed fair and just to all parties concerned. This was practically the bill of Dr. Rodman, with a few alterations and will appear at the end of this report.

By its terms the Board of Registration in Medicine was to be composed of three members of the Connecticut Medical Society, two of the Connecticut Homeopathic Medical Society, and one of the Connecticut Eclectic Medical Association and five votes in the affirmative were to be necessary for every action of the Board.

This was referred to the full Legislative Committee of the Homeopathic Society and unanimously rejected. It is only fair to state, however, that the loss of their only representative on the State Board of Health may have had considerable weight in causing this action.

Advice was then obtained, by mail, from the members of the Committee, all of whom, with one exception, were opposed to an equal number from each society, preferring to let the whole matter go over to another session, if we could not obtain what we desired at this time.

At about this time, the Judiciary Committee, supposing that a communication from the Chairman of one of the other Committees was the result of mutual agreement between opposing factions, reported adversely on the bill, and it was rejected in the House of Representatives. Later it was re-considered and referred back to the same Committee.

Further consultation was then had with the Chairmen of the Legislative Committees of the other Societies, with the result that the following amendment was agreed upon and was presented to and advocated before the Judiciary Committee by Drs. Hooker, Munn, and your Chairman:

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

Section 1. Section 8 of Chapter CLVIII of the Public Acts of 1893 is hereby amended to read as follows: The said Examining Committees shall hold three regular examinations in each year, as follows: One on the second Tuesday of March, one on the second Tuesday of July, and one on the second Tuesday of November, at such places as they may designate, and such additional meetings and at such places as they shall determine. Applicants to practice medicine or surgery shall be examined in anatomy, physiology, medical chemistry, obstetrics, hygiene, surgery, pathology, diagnosis, and therapeutics, including practice and materia medica. Each Committee shall frame its own questions and conduct its examinations in writing, and both questions and answers shall be placed on file with the State board of Health. Each applicant shall have the right to choose which of the three Commit-

tees shall be the one by whom he shall be examined; but before taking such examination he shall pay to the Committee the sum of fifteen dollars, provided, however, that the fee for examination in midwifery alone shall be ten dollars. An applicant, after having been rejected by any of said Examining Committees, shall not be eligible to examination by another Committee of Examination until after the expiration of twelve months.

Sec. 2. The Secretary of the State Board of Health, upon the written request of all of the members of any one of the Examining Committees provided for by Chapter CLVIII of the laws of 1893, shall have authority to revoke and cancel the certificate of registration of any person convicted of any crime in the practice of his professional business, or convicted of a felony, provided, however, that no one of the Examining Committees shall have the right to request the revocation and cancellation of a certificate granted upon the examination of any one of the other Examining Committees.

Sec. 3. Section 1 of Chapter CLXXXVII of the Public Acts of 1897 is hereby amended by adding at the end of the section the following: And no person shall be eligible to said examination until he presents evidence to the Examining Committee by whom he is to be examined satisfactory to said Committee, that he has received a diploma from some legally incorporated Medical College. So that it shall read as follows: No person, after the passage of this act, shall obtain or receive a certificate of registration as required by the provisions of Chapter CLVIII of the Public Acts of 1893, until he has passed a satisfactory examination before one of the Examining Committees appointed for the purpose under the provisions of said act, nor until he has complied with the other requirements of said act; and no person shall be eligible to said examination until he presents evidence to the Examining Committee by whom he is to be examined

satisfactory to said Committee, that he has received a diploma from some legally incorporated Medical College.

The passage of this amendment will secure for us a stated amount for the examination fee, stated times for the examinations, the withdrawal of license after conviction in criminal courts, the admission to examination of those only who can present certificates of graduation from legally incorporated medical institutions,—the same being four of the eight changes which we were requested to secure.

In the meantime, at the annual meeting of the New Haven County Medical Association, held April eighteenth, 1901, it was voted: "That the New Haven County Association endorse the Medical Practice Act, as amended in the Judiciary Committee, and assent to an equal representation of the three chartered Medical Societies, the same being essential to the enactment of said act."

It is unnecessary to add that on account of the almost unanimous opinion of the Committee in opposition to such action, this vote of the New Haven County Association was not considered.

I cannot refrain from expressing the hope that promoters of future medical legislation in this State will learn the lesson taught by our experiences in 1897 and 1901, and will be content to obtain, from time to time, in the way of amendments, what is needed, rather than to advocate an entirely new Medical Practice Act, which only serves to excite and stir up opposition from those who perhaps honestly feel that their rights are being interfered with.

Early in the session there was introduced a bill concerning the practice of osteopathy, which was ably presented before the Judiciary Committee by the attorneys for the osteopaths, Dr. E. B. Hooker, of Hartford, Dr. Elias Pratt, of Torrington, and your Chairman, appearing in opposition. There is apparently a powerful lobby at work on this bill, and so many prominent members of



both houses have either themselves or some of their relatives been so successfully treated by osteopathy, that great pressure was brought to bear on the Committee, and a substitute bill was favorably reported on April twenty-sixth, which is appended. We succeeded in getting this tabled on the following (legislative) day and no action has been taken. The attorneys in the case have consulted your Chairman, and are willing to remove all points to which we have raised objection, but as an agreement to these concessions on his part would be tantamount to a recognition of osteopathy as a system of healing and would insure the passage of their bill, thereby giving them State recognition, he has refused to agree to them, preferring rather to allow the measure to be fought out in the Assembly than to be a party to its passage.

Dr. Francis Bacon, of New Haven, who has been unable to meet with the Committee during the year, requests that he be relieved from further service on the Committee.

This leads me to call your attention to the composition of the Committee. Originally there was a general committee of five, to which was later added one from each County, whose duties were to aid in securing the passage of the proposed measures. As time wore on the Committees were merged together, until now all have equal authority. I would respectfully suggest that some action be taken whereby as old members drop out, none should be appointed in Counties which still have a representation on the Board, so that the Committee eventually will consist of the President and Secretary of the Society, and one member from each County.

E. J. McKNIGHT,  
Chairman.

## AN ACT CONCERNING THE PRACTICE OF OSTEOPATHY.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

Section 1. The Governor shall appoint on or before the first day of July, 1901, and biennially thereafter, three persons who shall constitute a State Board of Osteopathic Registration and Examination, who shall hold their office for two years from the first day of July in the year of their respective appointments and until their successors shall have been appointed and qualified.

Sec. 2. The members of said Board shall be resident osteopathic physicians of good standing in their profession and graduates of legally chartered Colleges of Osteopathy.

Sec. 3. Said Board shall appoint one of its number to be its recorder, whose duty it shall be to keep a record of the official proceedings of said Board, and copies of said record certified by him shall be legal evidence.

Sec. 4.—On request of said Board, the Comptroller shall provide a suitable room in the Capitol for its meetings.

Sec. 5. Said Board shall meet at the Capitol on the first Tuesday of March and September in each year, and at such other times as a majority of the Board shall appoint. At any meeting of said Board, a majority of the members thereof shall constitute a quorum.

Sec. 6. Said Board shall create no expense exceeding the sum received from time to time as fees as hereinafter provided.

Sec. 7. Said Board shall make such rules of procedure for the regulation of all matters of application and hearing before it as it may deem advisable.

Sec. 8. No person shall engage in the practice of osteopathy in this State after the first day of October, 1901, unless such person shall have first obtained from the said Board a license therefor.

Sec. 9. All applications for such license shall be in writing and signed by the applicant, upon blanks furnished by the said Board, setting forth such facts concerning the applicant as said Board shall require, and no license shall be granted to any person unless he shall have received a certificate of graduation from some reputable College of Osteopathy, duly recognized by the laws of the State wherein the same is situated, or unless he shall have spent as pupil or assistant at least two years under the instruction and direction of some reputable practitioner of osteopathy, or unless he shall have been actually engaged in the practice of osteopathy in this state at the time of the passage of this act.

Sec. 10.—Any person, who, at the time of the passage of this act, shall be actually engaged in the practice of osteopathy in this State, shall be entitled to receive such license upon making application to the Board as provided in Section nine of this act and paying a fee of two dollars.

Sec. 11. Any person, who, subsequent to the passage of this act, shall desire to commence the practice of osteopathy in this State, shall make application to the Board as provided in Section nine of this act. Upon the receipt of such application, the said Board shall require the applicant to submit to an examination as to his qualifications for such practice, which examination shall include the subjects of anatomy, physiology, obstetrics, minor surgery, and such other subjects as the Board may require. If such examination shall be passed to the satisfaction of the Board, the Board shall issue its license to the said applicant. A license, however, may be granted without such examination to any person who has been in active and continuous practice of osteopathy for three successive years in any other State, who shall satisfy the Board as to his fitness to engage in such practice.

Sec. 12. Except as provided in Section ten of this

act, every person applying for a license shall at the time of his application pay to the Recorder twenty-five dollars, and, if said applicant shall fail to obtain his license, twenty dollars shall be returned to him.

Sec. 13. The Board may refuse to grant a license to any person guilty of a felony, or addicted to any vice to such a degree as to render him unfit to practice osteopathy; and may, after notice and hearing, revoke such license for like cause. Any person aggrieved by the action of the said Board in the prohibition of his practice or the revocation of his license, may apply to the Superior Court or the Court of Common Pleas, next to be hold en in the County in which he resides, for a writ of mandamus, requiring said Board to revoke its decision, if the same be found on hearing to have been erroneous. Such application for mandamus may be served on said Board by some proper officer or indifferent person, by leaving with the Recorder, or at his usual place of abode, a true and attested copy thereof within twelve days after said Board shall have given notice of its decision.

Sec. 14. The Recorder shall keep an account of all moneys received by him, and shall annually before the tenth of November of each year render an account thereof to the Comptroller; and shall pay from the moneys received the expenses for necessary books and stationery for the use of said Board and the necessary traveling expenses of the members of said Board.

Sec. 15. The license provided for in Section eight of this act shall not authorize the holder thereof to prescribe or use drugs in his practice, nor to perform major or operative surgery. Osteopathic physicians shall be subject to the same rules and regulations that govern other physicians in the making and filing of certificates of birth and death, in the control of contagious diseases, and other matters pertaining to public health.

Sec. 16. Any person who shall engage in the practice

of osteopathy in violation of the provisions of this act, shall be guilty of a misdemeanor, and shall be fined not less than twenty-five dollars nor more than one hundred dollars for each offense.

Sec. 17. Nothing in this act shall be construed as prohibiting any legally authorized practitioner of medicine or surgery in this State from the practice of his profession as guaranteed him by the statutes of the State.

Sec. 18. This act shall take effect from its passage.

AN ACT CONCERNING THE PRACTICE OF MEDICINE, SURGERY,  
AND MIDWIFERY.

*Be it Enacted by the Senate and House of Representatives in General Assembly convened :*

Section 1. QUALIFICATIONS: No person shall practice medicine in any of its branches in this State after July 1st, 1901, unless previously registered and legally authorized or unless licensed and registered as required by this act: nor shall any person practice medicine who has ever been convicted of a felony by any court, or whose authority to practice is suspended or revoked by the State Board of Registration in Medicine as hereafter provided.

Section 2. BOARD OF REGISTRATION; APPOINTMENT; TERM: The Governor, with the advice and consent of the Senate, shall appoint seven persons, residents of this State, who shall be members of one of the legally chartered medical societies, and who shall have been employed in the practice of their profession for ten consecutive years, who shall constitute a Board of Registration in Medicine. Such persons shall be appointed and hold office for terms of one, two, three, four, five, six and seven years, respectively, beginning with the first day of July in the present year, and until their respective successors are appointed, and thereafter the Governor, with the advice and consent of the Senate,

shall appoint, before the first day in July in each year, one person qualified as aforesaid, to hold office for seven years from the first day of July next ensuing. No member of said Board shall belong to the faculty of any medical college or university. Vacancies in said Board shall be filled in accordance with the provisions of this act for the establishment of the original board, and the person appointed to fill a vacancy shall hold office during the unexpired term of the member whose place he fills. Any member of said Board may be removed from office for cause by the Governor, with the advice and consent of the Senate, and provided further, that each of the three legally chartered medical societies in the State shall have at least one representative on the Board.

**Section 3. ORGANIZATION; MEETINGS; POWERS:** The members of said Board shall meet on the second Tuesday of July next, at the capitol in the City of Hartford, and shall immediately proceed to organize by electing a President and Secretary, who shall hold their respective offices for the term of two years. The Secretary shall give to the State Treasurer a bond in the penal sum of one thousand dollars, with sufficient sureties to be approved by the Governor and Senate, for the faithful discharge of the duties of his office. The said Board shall hold regular examinations, one in March, one in July and one in November of each year, and such additional meetings as it may find necessary. Said Board shall cause a seal to be engraved and shall keep correct record of all its proceedings and is hereby authorized to make such rules and regulations as shall be deemed necessary for the successful enforcement of this act.

**Section 4. CLERK FOR BOARD:** The said Board of Registration in Medicine may, from time to time, appoint one of its number, or a person not a member of its board, to discharge the clerical duties imposed by this act upon said board, and may fix a salary therefor.

**Section 5. APPLICANTS FOR EXAMINATION:**

From and after the passage of this act, any person not hitherto authorized to practice medicine and surgery in this State, and desiring to enter upon such practice, shall deliver to the Secretary of the Board of Registration in Medicine, together with a fee of twenty-five dollars, a written application for examination, together with satisfactory proof that the applicant is more than twenty-one years of age, is of good moral character, has attained a competent high school education, and has received a diploma conferring the degree of medicine from some legally incorporated medical college.

Applicants who have received their degree in medicine after the passage of this act must have pursued the study of medicine for at least four years, including three regular courses of lectures in different years in some legally incorporated medical college or colleges prior to the granting of said diploma. Such proof, if required, shall be made upon affidavit. Upon making of such payment and proof, the Secretary shall issue to said applicant an order for examination before the State Board of Medical Registration.

**Section 6. EXAMINATIONS:** It shall be the duty of said Board of Registration to examine thoroughly every applicant who has complied with the preceding regulations, upon the production of his medical diploma from a recognized college upon the following named subjects: Anatomy, physiology, medical chemistry, materia medica, obstetrics and diseases of women, hygiene, surgery, pathology, diagnosis, therapeutics and any other branches that the Board may deem advisable; provided, however, that no preference shall be given to any school of medicine. Examinations shall be in writing and in the English language. The questions and the answers of applicants shall be kept on file, together with the records of said Board.

Section 7. **CERTIFICATES:** When the Board shall be satisfied as to the qualifications of an applicant they shall grant to him a certificate to that effect which shall entitle him to practice medicine in Connecticut.

Section 8. **MIDWIFERY; LICENSE; EXAMINATION:** The Board of Registration in Medicine shall make such regulations as may be necessary to determine the qualifications of women desiring hereafter to commence the practice of midwifery in Connecticut and shall issue certificates to such as are, after examination, found qualified. Applicants desiring to practice midwifery only, shall deliver to the Secretary of said Board a written application, together with a fee of five dollars, and no applicant who has been rejected shall be examined within one year from such rejection.

Section 9. **TEMPORARY CERTIFICATE OF QUALIFICATION:** The Secretary, with the written approval of any two members of the Board of Registration, is authorized to grant a temporary certificate of qualification to any applicant desiring to practice medicine in this State, until the next regular meeting of the Board; provided, however, that the applicant has never before received a similar certificate or been rejected by the Board. All temporary certificates shall cease to be of force at the regular examination of the Board next after the granting of the same.

Section 10. **LICENTIATES OF OTHER STATES:** Applicants licensed by examining and licensing boards of other states or foreign countries, upon the payment of fifty dollars to the Secretary of the Board of Registration in Medicine, and on filing with the Secretary of said Board a copy of his or her license or certificate certified to by the affidavit of the President and Secretary of such Board, showing also that the standard of requirements of said Board at the time the said license or certificate was issued, was substantially the same as that



required by the Board of Registration of Connecticut, and of his or her affidavit as to the personality thereof, may be granted a certificate to practice medicine in all its branches by said Board of Registration without further examination thereby. Nothing, however, in this act shall compel said Board of Registration to recognize the license of any state or foreign country with which said Board shall not have established reciprocal relations in the recognition of medical licenses or certificates.

**Section 11. COMPENSATION OF BOARD:** The expenses and compensation of the members of the Board shall be determined and paid by the Board, but shall not exceed the amount of fees received from applicants for examination.

**Section 12. RECORD; ANNUAL REPORT:** The Board shall keep a record of the names and residences of all persons registered hereunder and a record of all monies received and disbursed by said Board, and said records or duplicates thereof shall always be open to inspection in the office of the Secretary of State during regular office hours. Said Board shall annually report to the Governor, on or before the first day of January in each year, the report to contain a full and complete account of all its official acts during the year, also a statement of receipts and disbursements of the Board and such comments or suggestions as may be deemed essential.

**Section 13. REVOCATION OF CERTIFICATES:** Said Board may, after a hearing, revoke any certificate issued by it to, and cancel the registration of, any person convicted of any crime in the practice of his professional business or convicted of a felony.

**Section 14. PRACTICING UNDER AN ASSUMED NAME:** No person shall practice medicine, surgery or midwifery under a false or assumed name, or under a name other than that under which he is registered, or

shall personate a practitioner of a like or different name. No person, not being registered as aforesaid, shall advertise or hold himself out to the public as a physician or surgeon in this State, by appending to his name the letters M.D., or using the title of Dr., meaning thereby a doctor of medicine.

Section 15. **PENALTY FOR VIOLATION:** Any person violating the provisions of this act shall be punished by a fine of not less than one hundred dollars or more than five hundred for each offence, or by imprisonment in jail for three months, or both.

Section 16. **CONSTRUCTION OF ACT:** For the purposes of this act, the words "practice medicine" shall mean, to suggest, recommend, prescribe or direct, for the use of any person, any drug, medicine, appliance, apparatus, or other agency, whether material or not material for the cure, relief, or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture, or other bodily injury or any deformity, after having received or with the intent of receiving therefor either directly or indirectly, any bonus, gift or compensation.

Section 17. **NOT TO APPLY:** This act shall not apply to commissioned officers of the United States Army, Navy or Marine Hospital service, or to a physician or surgeon who is called from another state to treat a particular case or to any physician residing on a border of a neighboring State and duly authorized under the laws thereof to practice medicine therein, whose practice extends into this State, and who does not open an office or appoint a place to meet patients or receive calls within this State; or to any one while actually serving on the resident medical staff of any legally incorporated hospital, or to any legally registered dentist or pharmacist, exclusively engaged in practicing dentistry or pharmacy; neither shall the provisions of this act apply to

clairvoyants or to persons practicing hypnotism, magnetic healing, mind cure, massage, Christian Science, so-called, or to any other method of healing if no drugs are employed or surgical operations are performed, provided that none of such persons shall practice midwifery unless he shall have duly passed examination as hereinbefore provided. This act shall not apply to any person who has successfully passed medical examination of the United States Army or Navy. Army and Navy to be placed on same footing as those from states where we have reciprocal relations.

Section 18. TOWN CLERKS TO REPORT: It shall be the duty of the Clerk of every town in this State, on or before September 1, 1901, to furnish the Secretary of the Board of Registration in Medicine with a certified list of all physicians and midwives registered in his town and practicing in accordance with previously existing laws.

Section 19. REPEAL OF PREVIOUS LEGISLATION: All previous legislation relating to the practice of medicine is hereby repealed.

Dr. Pratt thinks that there should be two members from Hartford instead of one, on the Legislative Committee, on account of the necessity of frequent visits to the Legislature. The Osteopath Bill now lies on the table in the Senate. He expects the plan is to rush it through during the last days of the session. It was done so in Iowa. There are six or seven physicians in the Lower House. Dr. Pratt would like to have each Fellow talk with the Representative from his town and secure, if possible, his vote against the Bill.

Dr. McKnight—The attorneys have agreed to strike out those parts of the Osteopath bill to which we object, but he didn't want to be a party to recognize osteopathy even with that concession.

Dr. Pratt—Opposition may be made to the bill that it is bad policy on the part of the State to license any one

to treat disease unless he is competent. There is another thing which may not be generally known, but the large drug houses are putting up foods, so-called, and labeling them food for osteopaths. It is a short cut to the practice of medicine.

Dr. Mailhouse moved that the request of Dr. Bacon be granted—that he be excused as a member of the Committee on Legislation. This was granted. A discussion followed regarding the formation of the Committee on Legislation in which, suggestions and objections having been made it was decided that the Committee should stand as at present, the Committee ultimately to stand as consisting of one from each County, together with the President and Secretary, ex-officio, the member from each County to be appointed by the President of that County Association.

The Committee on Honorary Members had no report to make.

The report of the Committee on Medical Examinations was made by Dr. Tuttle.

#### REPORT OF THE COMMITTEE ON MEDICAL EXAMINATIONS.

*To the President, Fellows and Members of the Connecticut Medical Society:—*

Your Committee on Medical Examinations herewith presents its eighth annual report. The work of the year ending to-day has been carried on much on the same lines as that of the preceding year. We have contended with the old and with some newly added difficulties. Early in the year Dr. Mailhouse, compelled by accumulating duties in private and public, withdrew. The loss to the Committee and the State has been great. He has been from the very inception of Medical Legislation and a Medical Examining Board in this State their ardent supporter and a hearty and untiring worker in behalf of the medical profession and of our Society. He has as the result been instrumental in establishing in our State

what promises to be a great boon to legitimate medicine in the future. In October President Almy, in accordance with the law, appointed Charles Alling Tuttle, of New Haven, to fill the unexpired term of Dr. Mailhouse. This was confirmed by the State Board of Health in November and went into immediate effect.

We have held in the past year, six meetings, at all of which all members were present. We have examined fifty-six candidates, representing twelve States, twenty-eight colleges, four countries, and have found qualified forty-three, or seventy-six and eight-tenths per cent. Of those found qualified all were graduates of some medical institution and eighteen had bachelor or some equivalent degree. We are yet looking forward to the time when an undergraduate degree or some systematic study equivalent thereto will be required for entrance to all medical colleges. The number examined this year, fifty-six, is but one greater than last year and not out of proportion to that of neighboring States, which shows clearly, not only that our standard is at least as high as theirs, but that Connecticut has ceased to receive the illy-prepared and illegitimate practitioner from other States. So long as we hold unwaveringly to our present requirements of seventy-five per cent. and our present rigidity of marking, so long will we hold caste with Examining Boards of the highest class and be qualified, should power be given us, to enter into reciprocal relations with them at par. We have taken special pains this year to compare our examinations and our results with those of other States and we are convinced that our markings are as critical and our requirements as high as those of any State, and higher than in many. The question of an interpreter has again been brought forcibly before the Committee in that a Bill was presented to the Legislature, but afterwards withdrawn or merged into the regular Medical Practice Bill, requiring our Committee to

examine in the language of the applicant. We hope, because of the great confusion, extra labor and uncertainty which it involves that it will not again be presented. It would seem that anyone qualified to practice medicine or midwifery in our country should at least take the pains to learn our language. In common with Examining Boards in most of the States we find that candidates fail most frequently and grossly in materia medica and therapeutics and it is apparent that teaching in this important study has not kept pace with that in the other fundamental branches. We think an effort should be made to make the student more familiar with the appearance, characteristic, physiological and practical working of drugs than is obtained from the common text-book or didactic method of instruction. A more exact knowledge of the pharmacopeia and the ingredients and the proportions in the official preparations is also highly desirable. Why is it not feasible for teachers in this line to have hospital ward clinics and demonstrations as in diagnosis and practice?

We regret the failure of the Legislative Committee to secure the passage of the new Medical Practice Act embodying the changes suggested by our Committee in its seventh annual report. The real desirability of securing such changes at as early a date as possible grows more apparent at each of our sessions.

With this year expires the term of Dr. J. W. Wright as a member of this Committee. The remaining members cannot but express their sincerest appreciation of his work and counsel during his eight years of continuous service, and we take pardonable pride in his election to the Presidency of the New England Confederation of Examining Boards.

Respectfully submitted,

CHARLES ALLING TUTTLE,  
Secretary.

Appended is a list of successful applicants and the questions asked in the last examination:

July 10 and 11, 1900—

- Ashley, E. F., Yale, 1900.  
 Beach, O. J., Jefferson, 1900.  
 Budau, J. H. D., Yale, 1900.  
 Driscoll, D. M., P. & S., N. Y., 1900.  
 Dundon, A. H., Baltimore Med. Col., 1900.  
 Gillette, E. J., U of P., 1891.  
 Healy, W. P., Johns Hopkins, 1900.  
 Kenna, L. D., U. of N. Y., 1898.  
 Ives, J. W., Yale, 1900.  
 Lathrop, S. S., P. & S., N. Y., 1900.  
 McLaughlan, A. J., P. & S., N. Y., 1900.  
 Paine, R. C., Dartmouth, 1900.  
 Rand, R. F., Johns Hopkins, 1900.  
 Sands, Georgiana, Johns Hopkins, 1900.  
 Sharpe, H. R., U. of Vermont, 1900.  
 Thibault, L. R., Yale, 1900.  
 Turner, A. R., Paris, 1894.  
 Wadhams, N. S., Yale, 1900.  
 Wagner, J. J., Jefferson, 1897.

November 13 and 14—

- Ramsey, O. G., U. of Virginia, 1890.  
 Purington, C. A., Yale, 1900.  
 Miller, W. R., Albany Med. Col., 1898.  
 Adams, J. G., Trinity Med. Col., 1900.  
 Bahn, Henrietta V., U. of Mich., 1900.  
 O'Shaughnessy, E. J., Bell., 1899.  
 Loomis, J. S., Yale, 1898.  
 Vanstranda, W. H., U. of Vermont, 1900.  
 Winship, E. O., U. of Vermont, 1900.  
 Stanb, J. H., L. I. Med. Col., 1899.  
 Dupee, E. W., Baltimore Med. Col., 1900.  
 Bergin, T. J., Yale, 1899.  
 Stone, E. R., Jefferson, 1900.  
 Lewitt, Abram, Cornell, 1900.

Larson, Mrs. Anna, midwifery.

March 12 and 13, 1901—

Hyde, F. O., Mich Univ., 1900.

Foringer, H. S., P. & S., Balt., 1896.

Wakefield, F. S., P. & S., N. Y., 1899.

Parker, F. M., Richmond, 1899.

Bradren, F. B., U. of P., 1899.

Patterson, J. D., U. of N. Y., 1885.

Tetlow, H., West. Reserve, 1899.

Shipman, Mrs. Fanny, midwifery, Sweden.

#### RULES FOR EXAMINATION.

1. Examinations will be held on the second Tuesday of March, July and November at the City Hall, New Haven, beginning at 9:30 A. M., and lasting two days, closing at 4:30 P. M., of the second day.

2. Examinations will be conducted in writing in the English language.

3. Examinations for general practice consist of ten questions in each of the following branches: 1, Anatomy; 2, Surgery; 3, Materna Medica, including therapeutics; 4, Practice, including pathology and diagnosis; 5, Obstetrics, including gynecology; 6, Physiology; 7, Medical Chemistry and hygiene.

4. In order to be admitted to practice, the applicant must obtain a total average of 75 per cent. provided that in no branch shall the average percentage be less than 60, except in Practice, Obstetrics and Surgery, in which branches the minimum is placed at 65 per cent.

5. Applicants to practice midwifery will be examined in obstetrics only, and must obtain an average of 75 per cent.

6. Examination fee, \$10, payable in advance. In addition to such fee the candidate shall, if successful, pay 10 cents, as required by revenue law, for revenue stamps. This sum to be sent to the Secretary of the Examining Committee, upon receipt by the candidate of the duplicate certificates.



7. Candidates once rejected must pay full fee on another trial.

8. Graduates of Medical Colleges are requested to present their diplomas, for inspection, to the Secretary of the Committee at the opening of the session. Those having Bachelor's Degrees in Arts or Sciences will please so specify in their applications.

The questions\* were as follows:

*Anatomy.*

(Time allowed, 2 hours.)

1. Describe the structure of the skin and its appendages.
2. Name and number the carpal bones and give their articulations.
3. Name and describe the ligaments of the shoulder joint.
4. Describe the Trapezius muscle—giving its location, attachments and action.
5. What are the branches of the internal carotid artery?
6. What veins form the portal system?
7. Describe the thoracic duct.
8. Name the coverings of the brain from without inward and describe the pia mater.
9. Give the distribution of the fourth cranial nerve.
10. Name the lobes of the liver.

*Surgery.*

(Time allowed, 2 hours.)

1. Define a wound and give the varieties.
2. Given an infected wound of the fingers, describe the conditions which follow progressively to a fatal termination.
3. Give the symptoms and treatment of an acute osteo-myelitis.
4. Give the differential diagnosis of osteo-sarcoma and osteitis.

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\*Kindly loaned by the Secretary, Dr. Charles A. Tuttle.

5. What fractures are best treated by Buck's extension and how is it applied?
6. What are the varieties of talipes?
7. What are the stages of tubercular hip-joint disease and the symptoms in each?
8. What is a keloid and how treated?
9. What are the varieties of pleural empyema and its surgical treatment?
10. Describe hydrocele and the methods of surgical relief.

*Materia Medica and Therapeutics.*

(Time allowed, 2 hours.)

1. Give the physiological action of Ipecacuanha.
2. Name two drugs that dilate the pupil of the eye and state how they act.
3. Compare the use of Hydrochloric, Nitric and Sulphuric acids.
4. What are the symptoms of poisoning by (A) Cocaine. (B) Phosphorus.
5. Name six vasodilators.
6. What is the treatment of hæmoptysis, what of hæmatemesis?
7. What is the treatment of uræmia?
8. Indications and contra-indications for lavage.
9. Therapeutics of (A) Calomel. (B) Corrosive Sublimate.
10. Write a prescription in Latin unabbreviated, containing four ingredients to be used for constipation and give the reasons for using each ingredient.

*Practice, Pathology and Diagnosis.*

(Time allowed, 2½ hours.)

1. Give the symptoms and pathology of pleurisy. (A) Fibrinous. (B) Serous.
2. What are the causes of jaundice?
3. Differentiate uræmic coma from alcoholism.

4. Give the varieties of and treatment for the intestinal parasites.
5. Diagnosis and treatment of lead palsy.
6. Symptoms and treatment of ophthalmia neonatorum.
7. Give the symptoms and course of leukemia.
8. Etiology of cough.
9. Give the symptoms and treatment of chorea.
10. What are the causes of hæmaturia?

*Obstetrics and Diseases of Women.*

(Time allowed, 2 hours.)

1. Give the gross and minute differences between the decidua of ectopic pregnancy and that of membranous dysmenorrhœa.
2. Give the signs of beginning labor.
3. Name the cephalic presentations in order of frequency and give anatomical reasons for this order.
4. Describe the superior strait of the mature female pelvis.
5. Diagnosis of twin pregnancy. How made? How early in pregnancy can we expect to make it?
6. In twin labor with first child, presenting feet first, how would you try to prevent locking of the heads? The heads becoming locked, how would you complete delivery?
7. How would you diagnose placenta previa? How manage the case if it were found approximately central?
8. Treatment of membranous dysmenorrhœa.
9. How would you arrest lactation?
10. Treatment of a severe case of infantile asphyxia.

*Physiology.*

(Time allowed, 1½ hours.)

1. State where and describe how fats are absorbed.
2. Enumerate and give age at which the temporary teeth appear.
3. Define the proximate principles of the body.

4. Give the chemical elements of which the proteids are formed.
5. Describe how the heat of the body is produced and maintained.
6. Name the ductless glands, and state their use.
7. How does the blood of the hepatic vein differ from that of the portal?
8. Give briefly the work done by the kidneys.
9. Describe the digestion of a breakfast of ham, eggs and potatoes.
10. State how the blood-current in the veins is maintained.

*Chemistry and Hygiene.*

(Time allowed, 1½ hours.)

1. Name six metals and four non-metals used in medicine.
2. Define atomic weight. How may the equivalence of an atom be graphically expressed?
3. Iodine. Physical Properties. From what and how prepared? Action upon starch.
4. Glycerine. Chemical formula? Physical properties? What results upon its treatment with nitric acid?
5. Give in detail three reliable tests for sugar in urine.
6. Prophylaxis of Malaria.
7. Diagnosis of Small Pox.
8. How would you disinfect after Scarlet Fever?
9. What diseases may be spread through the medium of milk? How prevented?
10. State your opinions concerning the influences of sewer emanation in spreading Typhoid Fever and Diphtheria?

Dr. Taft made the following

REPORT OF THE NOMINATING COMMITTEE:

*President.*

J. H. Grannis, Old Saybrook.

*Vice President.*

G. A. Shelton, Shelton.

*Treasurer.*

W. W. Knight, Hartford.

*Committee on Matters of Professional Interest in the State.*

Dr. N. R. Hotchkiss,

Dr. E. K. Root,

Dr. E. P. Flint.

*Committee to Nominate Physician to the Retreat for the Insane.*

Dr. F. K. Hallock,

Dr. S. B. Overlock.

*Assistant Secretary.*

J. H. Townsend, New Haven.

*Committee on Honorary Members and Degrees.*

H. L. Swain,

S. B. St. John,

W. C. Haven.

*Committee of Arrangements and Anniversary Chairman.*

F. H. Wheeler, Chairman.

F. W. Wright,

B. A. Cheney.

*Committee on Medical Examination.*

C. C. Beach, Hartford.

*Dissertator.*

Oliver T. Osborne, New Haven.

*Alternate Dissertator.*

Elias Pratt, Torrington.

*Delegate to the National Medical Legislation at Washington.*

Charles S. Rodman, Waterbury.

*Delegates to American Medical Association, 1902.*

H. G. Howe,

F. Schavoir,

Charles S. Rodman,

Rienzi Robinson,

F. N. Braman,

Ralph S. Goodwin,

W. L. Higgins,

Kate C. Mead.

*Delegates to Maine Medical Association.*

H. W. Ring, F. A. Morrell.

*Delegates to the New Hampshire Medical Society.*

Charles D. Alton, C. C. Godfrey.

*Delegates to the Vermont State Medical Society.*

Harmon G. Howe, Ward H. Sanford.

*Delegates to the Massachusetts Medical Society*

Thomas F. Rockwell, George R. Harris.

*Delegates to the Rhode Island Medical Society.*

Charles N. Allen, W. F. Richards.

*Delegates to the New Jersey Medical Society*

C. P. Lindsley, Charles C. Beach.

*Delegates to the New York State Medical Association.*

W. S. Randall, S. D. Otis.

C. E. Taft, E. F. Hall.

Dr. J. W. Wright nominated Dr. S. M. Garlick in place of Dr. C. C. Beach as a member of the Committee on Medical Examinations.

The Secretary was directed to cast a ballot for all the candidates named in the report with the exception of Dr. Beach. This was done and they were elected.

Dr. Garlick was then elected as a member of the Committee on Medical Examinations after the second ballot.

The Auditing Committee, Dr. Jennings, reported that they had examined the Treasurer's report and found it correct. The report was accepted.

Dr. Foster from the Committee to Consider the Suggestions in the President's Address, made a motion that the report from the American Medical Association asking an endorsement of their plan for the reorganization of the Association, be granted, that we approve the suggestions regarding the reorganization and that we send notice to the meeting at St. Paul.

Moved further, that we endorse the proposition for a Psycho-Physical Laboratory for Medico Sociological purposes.

Dr. Calef made report for the Medico-legal Committee; said that the Committee had examined the laws in all the States; also decisions of the Supreme Courts bearing upon the case, as far as possible. The subject referred to them by the meeting was that the communications between patient and physician should be privileged and so considered in the courts. We deem it impossible to enact such a law in this State on account of opposition, both from the lawyers and from the Legislature itself. It is not deemed advisable to introduce such a law, laws are so interpreted in our State. A suit against a physician for malpractice has been decided by the statements of the patient made to the physician, while the testimony of the physician would not be received. The subject is one of great importance.

The report was received and the Committee continued.

Motion was made that a tax of three dollars be laid for the ensuing year.

Dr. Eliot is opposed to increasing the tax—is opposed to spending so much on the Proceedings.

Dr. Rodman made an amendment to make the tax \$2.25 and this was passed.

The meeting then adjourned.

## THE ANNUAL CONVENTION.

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WEDNESDAY, MAY 22, 1901.

The annual Convention was called to order immediately after the adjournment of the meeting of the President and Fellows.

### SECRETARY'S REPORT.

Co-operation of State with National organizations, the central seeking the help of the local and all working together with system and effect has been a distinguishing characteristic of the medical work of the year. And this has continued to an extent unusual beyond previous years. It is shown in our own Society by the appearance upon our announcement of two extra Special Committees, which have been appointed by our President at the request of two national organizations. One of these requested our help in suggesting any changes which might be made in the revision of the United States Pharmacopoeia; the other was to study the condition and treatment of epileptics in our State as a branch of the National Society for the study of that disease, help to be obtained, so far as is practicable, from all the States of the Union. Reports from both of these committees will form an interesting part of our Proceedings.

Some interesting correspondence has been held with the Secretary of the American Medical Association. At its last meeting a Committee of Organization was appointed, to consider and recommend a plan for a thorough organization of the medical profession of this country. It was found that there are about 1,300 regular medical societies, acting independently of each other, each based on a law of its own, scarcely any two being organized alike. The result is a lack of uniformity or



concert of action among them. The purpose of the Committee is to suggest and carry out a remedy whereby the State bodies may be brought together. A plan for a more perfect system is to be presented at the St. Paul meeting. It will be interesting and pleasing to our members to learn that the system prevalent in our own Society in which membership in a local society constitutes membership in the State Society, is pronounced to be the ideal plan. In the circular which it issued the Committee "believes that if the profession is to become a united body, the foundation must rest in the County Society; these to be branches of the State Society, all organized on a specific plan as made by the State Society." It is very agreeable to have our form of organization thus endorsed and also to know that the New York State Medical Association in reorganizing has adopted our system as the best. They have one representative, however, in ten members.

Our President has called attention to the fact that the Vermont State Medical Society has the same plan.

Your Secretary has had some correspondence with the Secretary of the American Medical Association on this matter. To those not acquainted with the practical working of our Society, our method of representation would seem to be at fault. Dr. Simmons writes: "Your plan of representation is peculiar, at the same time excellent, only it does not seem quite fair to give the very small societies as large a representation as the large ones. On the other hand, it is not fair to give one or two societies a chance to dominate the action of the State body." Constituted as our State is it would seem as if our organization could not be much improved, while saving the integrity of the smaller counties and giving opportunities to every portion of the State.

As the plan proposed by this Committee on Organization of the American Medical Association is of interest to every member of this Society, I cannot do better per-

haps than by making Dr. Simmons' letter a part of this report:

We propose to create a "House of Delegates" which will take the place of the Nominating Committee and of the General Executive Committee—in fact, it will take the place of the large general meeting as regards all business and financial matters. It will practically be the A. M. A. This body is created as follows:

First. Regularly elected delegates. These to be elected by the various State Societies in the ratio of one to every five hundred or minor fraction thereof.

Second. Ex-officio representatives from each State, these being the Presidents of the State Societies.

Third. Ex-officio, the retiring chairmen of the thirteen sections.

We figure that this will give us a body of not less than one hundred and fifty or more than one hundred and seventy-five. In fact, this is to be the fundamental rule, that the House of Delegates shall not exceed one hundred and seventy-five or be less than one hundred and fifty.

To avoid a few large societies getting control of the House of Delegates, two things are provided. First, the fractional representation. A society of five hundred and one members will be entitled to two delegates, whereas a body of 1,000 members will only be entitled to two. Any number over 1,000 and under 1,500 will be entitled to three, etc. This, however, only helps this matter slightly. To still further avoid this difficulty, we have given each State, whether large or small, one delegate, as stated above.

Therefore, when we consider that the smaller States must have two delegates and the larger ones cannot have over eight, or at the outside ten, in the future, you can readily see that there cannot be any dominating combination among a few States.

To avoid the difficulty with which the active body of

the British Medical Association is charged, that is, being a self-perpetuating body through a possibility of one society electing the same men year after year, the sixty-three ex-officio members must necessarily be new each year.

To avoid the opposite difficulty of the body being composed of all new members at any meeting, the delegates are to be elected for two years, hence we may be sure of some being carried over from the previous year. Very often business brought up at one meeting is not finished and hence it is necessary for some of the old members to be present when the matter is taken up in order to explain the action of the previous year.

It will take too long to go into the other details but the above practically covers the important points.

The Constitution is to be carefully revised to include certain important fundamental principles and this will not be changeable except by a two-thirds vote of the House of Delegates and approved by a majority of the State Societies. In this Constitution will be incorporated a principle that we think will avoid politics in the House of Delegates; that is, that no member of the House of Delegates shall be eligible to any office in the gift of the Association, so that while these delegates have a right to vote, they cannot elect any of their own body.

I would like to have your views in regard to the matter. Of course, the above only covers the A. M. A. We recognize the fact that we cannot dictate to the State Societies, but as there is to be a committee appointed, consisting of one from each State, and this committee will be called together before the meeting of the Association, we shall prepare plans to recommend to this general committee for the organization of the State and local bodies. To have a perfect organization in each State, it will be necessary for the State Societies to take up this matter, and we think that under the reorganized

A. M. A. the State Societies will be willing to do what the majority may decide upon in the way of organization. The A. M. A., under the new plan, will be a creature of the State Societies. The State Societies will be so interested in it and its work that we are sure there will be a more direct unity than has been possible in the past, and not only that, the State Societies will realize their responsibility to the National body, for the very reason that they created it. It is really a central body through which the State Societies may come together. That covers the whole principle of it.

Again thanking you, I remain,

Very truly yours,

GEORGE H. SIMMONS.

It would hardly seem as if we would be asked to change our plan of organization at all.

The proposed changes in the Medical Practice Act and the establishment of a Hospital for the Cure of Consumptives have been before the Legislature of the State as recommended by our action of last year, and have already been reported upon by our Committee on Legislation. The changes without the Society in the things which affect us, are greater than those within. These are less than usual.

Our present membership is 684; a net gain of seventeen, as against seven last year.

The changes by counties are as follows:

Hartford, 1900,	155	
New members,	8	
		<hr/>
		163
Resigned,	1	
Suspended,	1	
Removed,	1	
Died,	4	
		<hr/>
		7
		<hr/>
		156 a net gain of 1

New Haven, 1900,		199
New members,		11
Transferred,		1
		<hr/>
		211
Died,	3	
Removed,	6	
	<hr/>	9
		<hr/>
		202 a net gain of 3
New London, 1900,		48
New members,		2
		<hr/>
		50
Removed,	1	
	<hr/>	1
		<hr/>
		49 a net gain of 1
Fairfield, 1900,		120
New members,		7
		<hr/>
		127
Removed,	2	
Died,	1	
	<hr/>	3
		<hr/>
		124 a net gain of 4
Windham, 1900,		34
New members,		3
Reinstated,		1
		<hr/>
		38
Died,	1	
Removed,	1	
	<hr/>	2
		<hr/>
		36 a net gain of 2

Litchfield, 1900,		54
New members,		4
		<hr/>
		58
Dropped,	1	
Removed,	1	
	<hr/>	2
		<hr/>
		56 a net gain of 2
Middlesex, 1900,		43
New members,		1
		<hr/>
		44 a net gain of 1
Tolland, 1900,		17
New members,		1
		<hr/>
		18
Died,	1	
	<hr/>	1
		<hr/>
		17 no change

This gain is not so much in the added members as in the small number of those who have removed from the State or have been dropped. An encouraging condition of affairs. Not a county has diminished members. Tolland alone remains the same.

The new members, with present residence, place and date of graduation, are as follows:

Irving DeLoss Blanchard, Yale, '97, Hartford.

Emil Gustav Reinert, Baltimore Med. College, '95, Hartford.

George Elmer Porter, B.S., Dartmouth, '88, Dartmouth, '91, Warehouse Point.

Rollin Blackman Chatfield, Yale, '93, Granby.

Arthur Douglass Hayes, Dartmouth, '96, Hartford.

Kenneth Evernglien Kellogg, P. & S., N. Y., '98, New Britain.

- Herman Augustin Tyler, Jr., Yale, '98, Hartford.  
 Frederick Lyman McKee, P. & S., N. Y., '99, Hartford.  
 Charles Herman Gardner, N. Y. Univ., '85, New Haven.  
 William Samuel Barnes, Ph.B., Yale, '95, Yale, '97, New Haven.
- Joseph Anthony Cooke, Yale, '97, Meriden.  
 Edward Aloysius Haire, Baltimore Univ., '98, Derby.  
 Irwin Granniss, Yale, '96, New Haven.  
 Clarence Leishman Kilbourn, Yale, '97, New Haven.  
 Theodore Dominic Pallman, Yale, '97, New Haven.  
 Henry Edward Hungerford, Yale, '98, Waterbury.  
 Gilbert Totten McMaster, Jefferson, '98, New Haven.  
 Charles Ambler Ryder, Yale, '98, Waterbury.  
 Frank James Tuttle, Univ. Vt., '98, Nangatuck.  
 Harry Moore Lee, Columbia, '98, New London.  
 Raymond Reeves Gandy, Univ. of Penna., '99, Colchester.  
 Elmer Francis Blank, Starling Med. Coll., '97, Bridgeport.
- Charles Sumner Goodwin, Univ. N. Y., '96, Bridgeport.  
 Kirk Wilder Holmes, L. I. Coll. Hosp., '95, Cos Cob.  
 Glenwood Medcalf DeLisser, Washington Univ., 1897, Bridgeport.
- Irving LaField Nettleton, L. I. Coll. Hosp., '98, Bridgeport.
- Richard William Ivers, Balt., Med. Coll., '95, Bridgeport.  
 Frederick Symonds Wakefield, P. & S., N. Y., '99, Bridgeport.
- Frederick E. Rainville, Univ. Vt., '91, Wauregan.  
 Joseph Arthur Gironard, Baltimore Med. Coll., '99, Willimantic.
- Albert Lewis Schnyler, Balt. Med. Coll., '75, Bantam.  
 Amos Avery, L. I. Coll. Hosp., '99, Hampton.  
 Noah Samuel Wadhams, Yale, 1900, Goshen.  
 Timothy Grattan O'Connell, Yale, '99, Thomaston.  
 Michael Richard Laden, Baltimore Univ., '98, Torrington.

Jessie Weston Fisher, Woman's Med. College of Penna., Phila., '93, Middletown.

Frank Brownlie Newton, Univ. Vt., '99, Stafford Springs.

Of these graduates Yale has eleven, nine are from New York, each of the three colleges having three; six are from Baltimore. The University of Vermont maintains the average, with three, Dartmouth has two, while four colleges, including the Jefferson, have one each.

During the year, two of our noted Honorary members have died. The earlier of our Honorary members were sometimes chosen because of their having served at our meeting as Delegates from some other Society. But a glance at the page which contains their names will show men eminent in the profession, who have been carefully selected because of their distinguished merit. Such were Doctors Skene and Squibb.

Dr. Alexander Johnston Chalmers Skene died in Brooklyn, July fourth, 1900, at the age of sixty-two. He was born in Fyvie, Aberdeenshire, Scotland, of a family which had already made a history. He came to America at the age of nineteen, three years later began the study of medicine at Toronto, matriculated at the University of Michigan in 1861, and graduated from the Long Island College Hospital in 1863. The Civil War gave opportunity for his activity and genius and as Acting Assistant Surgeon in the Department of the South he became prominent in plans for army ambulance work.

In 1864 he began practice in Brooklyn and within a year had begun his hospital and college work in obstetrics. At the Long Island College Hospital he became teacher, operator, Dean and President. He was also Professor of Gynecology in the New York Post-Graduate Medical School, 1883-6; was one of the founders of the American Gynecological Society as also of the International Congress of Gynecology and Obstetrics. Aberdeen University conferred upon him the degree of



LL.D. in 1897. He was the author of "Diseases of the Bladder and Urethra in Women," "Treatise on Diseases of Women," "Education and Culture as Related to the Health and Diseases of Women," "Medical Gynecology" and "Electro Hemostasis in Operative Surgery." He was a man of breadth of views of great capacity for work, of inventive genius, of strong likes and dislikes, and of personal magnetism. He was elected an Honorary Member of this Society in 1894.

Dr. Edward Robinson Squibb was born in Wilmington, Delaware, July four, 1819. In 1845 he graduated from the Jefferson Medical College, Philadelphia. He was very shortly after appointed a surgeon in the United States Navy and attached to a ship, the Mexican War being then in progress. At the close of the war he was transferred to the Brooklyn Navy Yard and placed in charge of the Medical Station there. Here, dealing with the preparation of medical supplies was probably begun the work which developed into his becoming the foremost representative of American Medicine and Pharmacy. He entered service in the Civil War, but after a few years resigned and started a private manufacturing laboratory in Brooklyn. Here he became the leading pharmacist of the country. Recognizing the importance of strict purity in all drugs, having no secrets of manufacture, by constant care he gained the confidence of all upon whom he was dependent for business.

In 1858, he joined the American Pharmaceutical Association, and in 1860, 1870, 1880 and 1890 had actively to do with revision of the Pharmacopœia. His contributions to chemistry have been numerous and there is not a class of preparations in pharmacy which have not been improved by his investigations.

He was made an Honorary Member of this Society in 1892.

Among our Active Members the oldest in years of

graduation was Abner Spicer Warner of Wethersfield.

He entered Dartmouth College and graduated in 1842. Six years later he received his medical degree, from the same institution. For more than fifty years he lived and practiced medicine in Wethersfield, attached to the people and the place. A portion of this time he was physician to the State Prison. He became a member of this Society in 1849 and had therefore completed a membership of more than half a century. He never did much active work as a member, but he served as a Fellow when the Society met at Gilman's Saloon, Hartford, in 1853.

There are only five in the Society whose date of medical graduation is earlier than was that of Dr. Warner.

Elisha Dean Swift graduated in medicine at the University of New York, in 1849. The only record of him in the Proceedings is that he became a member of the Connecticut Medical Society in 1853.

Every department of work in the Society will mourn the loss of Dr. Melancthon Storrs. To simply narrate his record among us will occupy as much space as can be allowed in this report.

He was the fifth in descent from Samuel Storrs, who came from Nottinghamshire, England, in 1663, and settled in Barnstable, Mass. He was born in Westford, the son of a farmer.

He graduated from Yale in 1852. Among his classmates were D. C. Gilman, William Preston Johnson, Homer B. Spragne, Charles L. Ives. In the following year he took his medical degree at Yale in the class with Francis Bacon. The title of his thesis was "The Language of the Deaf and Dumb."

In 1857 he served as a Fellow from Colchester, New London County. On the fourth of October, 1861, he was commissioned as Surgeon of the Eighth Regiment, Connecticut Volunteers. Dr. Francis Bacon had been previously commissioned Surgeon of the Seventh Regiment, and was followed by Dr. George C. Jarvis, of Portland.

In 1867 Dr. Storrs was chosen a member of the Committee for selecting the subjects and awarding the Russell and Jewett prizes. Competition for these prizes was open to all physicians and surgeons of the United States and the British Provinces of North America. The other members of the Committee were Benjamin H. Catlin, Leonard J. Sanford, Henry Bronson and Charles L. Ives. The subject chosen for the Jewett prize was, "By What Hygienic Means May the Health of Armies be Best Preserved?" And of the Russell prize, "The Therapeutic Use and Abuse of Quinine and Its Salts." The value of each prize was two hundred dollars.

In 1869 Dr. Storrs appeared as a Fellow from Hartford County. In 1884 he was chairman of the Committee of Arrangements; in 1885 President of the Hartford County Medical Association. At this meeting he was selected as a member of the Committee to consider the revision of the Charter. He presided at the deliberations of that Committee in New Haven. Both the majority and minority committees were voted down, the Society thus declining to change its basis of representation.

In 1889 he was elected Vice-President of the Connecticut Medical Society, out of the regular order of events, inasmuch as he was not the candidate of the Nominating Committee. The same year he was made Chairman of the Committee on Legislation. It was while filling this position, which he did up to the time of his death, that he displayed so much energy, and vigor. Those who served with him know how much we, as a Society, are indebted to him for the carrying through of the Medical Practice Act—work which was continued through two sessions of our Legislature. At this time, 1889-90, he was also occupied in arranging plans for the celebration of our Centennial. He was selected as Chairman of the Section on General Surgery and lead it by reading a paper on "A Century of Surgical Progress."

His address as President was on "The Health of Our Schools." This was issued as a reprint among the teachers and educational authorities of the State. Other papers which he furnished for our Proceedings are: in 1870, "The Ligature as a Hemostatic;" in 1877, "The Treatment of Vaginal Lacerations From Parturition;" in 1878, "Cases and Remarks Upon the Origin of Typhoid Fever;" in 1887, "Neurectomy of the Tri-facial Nerve;" in 1890, "Diagnosis of Intercranial Tumors, with a Case."

Dr. Moses Clark White was probably more conversant with the history of the Society than any man in it. He was born in 1819 from sturdy old English stock and inherited sound health, good morals and readiness for work which developed into a firm character and a life of even and undisturbed rectitude. At the age of twenty-two he graduated from Wesleyan University, having worked his way through the four years' course. For two years thereafter he studied medicine and theology in New Haven, having determined upon the life of a missionary, with China as a field. He prepared further for his work in the foreign field by preaching on Sundays in Methodist churches when he could find a place. In 1847 he sailed for Fu-chau. After less than a year of labor his wife died and his own health became impaired. In 1853 he was compelled to give up his work and return home, but he had meanwhile gained valuable medical knowledge from the drugs and diseases of the country and done much to facilitate the labors of his successors by his translation of the Book of Matthew into Chinese, the first Christian document ever published in the dialect of that region. He graduated in medicine from Yale in 1854, and was appointed Lecturer on Microscopy at the Yale Medical School. In 1867 he was appointed to fill the chair of Pathology, which was then created. This was a very favorite study with him and the improved methods which he discovered and adopted, both in the lantern in micro-photography and in the mounting

of specimens are seen in many ways in the Medical College where he labored so long, so faithfully and with so much enthusiasm.

He was appointed Medical Examiner for New Haven shortly after the enactment of the law providing for such an office.

As a member of the Connecticut Medical Society Dr. White was as faithful as in every phase of his long and useful life. He was present at the last annual meeting and took part in the discussion, as the Proceedings show. He was at that time eighty-one years of age.

He graduated in medicine at the Medical Institute of Yale College. The subject of his thesis was, "The Abuses of Opium;" a subject which we may well believe had made a profound impression upon him during his stay in Fu-chan. His home at that time was Cardiff, N. Y. He early began to appear as a Fellow and not only to be present but to take an active part. All through the Proceedings we note his name as participating in the discussions—whether of medical topics or the government of the Society.

In 1864 he was elected Secretary pro tem. on account of the absence in Europe of Dr. Leonard J. Sanford. He held the office until 1876, when he resigned. He never received any pay for his services, giving his labor for the benefit of the Society and of the profession.

In 1880 he was President of the New Haven County Medical Association; in 1881 Chairman of the Committee on Lunacy Commissions in the United States and Foreign Countries; Their History, Aims and Results. This was an effort to provide additional safeguards for the insane, whether in hospitals, private institutions, almshouses, their homes or elsewhere, by having this Society memorialize the General Assembly to create by law a State Board of Commissioners in Lunacy.

He took active part in the discussion concerning the

legal status of the Connecticut Medical Society and its relation to the college, showing his knowledge of the Charter.

In 1890, during a discussion on appendicitis, he made the statement that he had performed six hundred post-mortems in fifteen years. July thirteen, 1867, he was nominated as Professor of Pathology and Microscopy.

The papers which he has furnished for the Proceedings are: 1863, "Physiology of the Crystalline Lens; or Adjustment of the Eye to Distant Vision at Different Distances. In the same year, "Report of An Anomalous Surgical Case," by which a nail broken off in the foot, separated into twenty-six splinters, which were successfully removed after intense suffering.

In 1869, "Vital Force;" 1871, "Chloral Hydrate;" 1883, "The Microspectroscope;" 1890, "Morphology of Embryonic Blood." At the Centennial celebration he had charge of the Section of Microscopy and gave a paper abundantly illustrated by lantern slides, but he declined to allow it to appear in the Proceedings.

Others who have gone from us during the year are: Elbridge Knowlton Leonard, 1866, of Rockville; Julia Newell Parker, 1867, of South Manchester; Emory Hawkins Davis, 1872, Plainfield; Willis Edward Weed, 1883, of Ridgefield, and Walter Zink, of Braunford.

The plan, recently adopted, of making the President and Vice-President members of the Publication Committee, with power to solicit papers and arrange their own program, is a great improvement over former methods. Papers written especially for the meeting are given a preference, so that if put into the printer's hands they may be printed in advance of the meeting. If all the writers would be prompt in sending in their manuscripts so that the County Clerks could send them to the Secretary with their annual report, much labor would be saved and the Proceedings could be issued more promptly. I cannot urge

this too strongly upon the members of the Society. The program for the meeting this year is an unusually full one. There are ten papers written especially for this meeting, besides one by Dr. W. W. Hawkes, "Some Observations on Surgery," which came too late to appear upon the announcement. The varied and interesting list of papers presented at the various County meetings and referred to the Committee on Publication shows good work on the part of the four Counties, which send them. They are thirty-four in number. All these, together with the reports on the Progress of Medicine and Surgery, the report of the Committee on Matters of Professional Interest in the State, the Dissertation, the President's Address, form an attraction which should secure a large and an enthusiastic meeting.

N. E. WORDIN,  
Secretary.

The first paper read was by Dr. W. L. Barber on "Sarcoma of the Duodenum," followed by Dr. J. E. Root, "A Case of Fracture of the Spine with Recovery."

On motion of Dr. Ingalls the reading of the papers following upon the program were made the special order for to-morrow morning and the meeting adjourned at five o'clock.

#### THURSDAY, MAY 23.

The meeting was called to order by the President at 10:10 A. M.

The first thing in order was the reading of the paper, "Three Cases of Appendicitis Complicating Pregnancy," by Dr. S. B. Overlock. Dr. R. W. Kimball read a paper on "Adenoids."

Delegates from other Societies were called for.

Dr. B. G. Sands, of Portchester, replied. He takes pleasure in extending the greetings of the New York State Medical Association and expresses gratification in noticing the prosperity of this Sister Society.

Dr. J. G. Marble, of Worcester, Mass., said he felt like the old lady at the prayer meeting, that it is good to be here. Anatomically speaking, Boston is the head of Massachusetts, Worcester is spoken of as the heart of the Commonwealth while Springfield is the liver for there are many high livers and good livers there and Dr. Keefe, his colleague, would tell about them in his remarks. No one has met a Boston gentleman who will not acknowledge them to be heady sort of men—their physicians the representative medical gentlemen of the world; almost the equal of some of the Hartford men, which is looking high. He had hardly expected to be called upon at this time. Felicitations are generally given after a hearty meal at the close of the day when men have eaten and are fluent. He is happy to convey the congratulations of the Massachusetts Medical Society. Many of our members are acquainted with yours and courtesies are frequently exchanged. He was particularly instructed to convey heartiest congratulations to the Connecticut Medical Society.

Dr. D. E. Keefe replied that there was little left for him to say, but he would emphasize all that has been said. Good fellowship should exist and does exist between the physicians of Massachusetts and Connecticut. Massachusetts is an elder sister. She antedates you in her college and in her Medical Society. Litchfield County organized a Medical Society before the existence of Harvard and protested against the quack. But the Convention would not grant a charter because, it said, it would be creating a monopoly.

He seconded Dr. Marble in extending the right hand of fellowship from twenty-six hundred members.

Dr. Overlock responded, extending greetings for the Maine Medical Association.

The reading of papers was resumed, Dr. Ingalls presenting "The Ultimate Result of Hysterectomy for Cancer."



The report of the Committee on Matters of Professional Interest in the State, which had for its subject, "Artificial Infant Feeding," was read by Dr. W. G. Murphy, chairman of the Committee.

Reports of Delegates appointed to visit other Societies were called for. The only responses were from the Pan-American Congress and the British Medical Association.

REPORT OF PAN-AMERICAN CONGRESS AT HAVANA, FEBRUARY  
4TH-7TH, 1901.

Your Committee reached Havana February third, by a steamer from New York. The temperature when we left New York was three below zero, with a driving snow storm. At Havana, three days later, it was eighty-five in the shade. The impression which one gets is that Havana under a settled government would be one of the most attractive cities of the new world, both as a resort and as a place of residence. The effect of American military rule is so apparent in every direction that this impression is deepened. The death-rate under the Spanish rule in February, 1898, was eighty-two to the thousand. Two years later, under American regime, it had dropped to nineteen in the thousand. Other equally startling sanitary reforms and changes have been effected under the management of General Wood, the Military Governor. The third Pan-American Congress was formally opened Monday evening, February fourth in the Tacon Theatre, General Wood, presiding with the President of the Congress. The general address and speeches of welcome were given in Spanish except that of General Wood, and were not noticeable for anything more than volubility and compliments. The next day the different sections of the Congress, numbering nearly twenty, met in the recitation halls of the Havana University, which opened out on a square. These halls were small, pleasant rooms, and the attendance at each section was large.

About eighty English-speaking delegates from the States were registered, and about twenty papers were contributed. Most of these papers were read by title as the number of English-speaking hearers was so small, and the translation was difficult. The papers read in Spanish seemed to bring out a great deal of comment in the nature of personal opinions and general compliments. These were given in a rapid, voluble way, with no regard for time, each man having unlimited opportunity to express himself in any way he pleased. The tumultuous manner of speaking gave the impression of great earnestness and clearness but in reality it was a mere mass of words and platitudes. A very large part of the papers read were common-place, hording on the antique in physiology, pathology, and treatment, and many of them were based on medicine as taught in Spain and France some years ago. The paper of Dr. Walter Reed, giving new researches, showing that yellow fever was propagated by mosquitoes, and that the clothing of these cases was not infectious was the most sensational of all, and brought out a great deal of comment. The Spanish auditors seemed astounded at the boldness of these experiments as yellow fever is a constant disease with them. They were very free to discuss the proposition. In the Surgical Section, Dr. Davis, of Birmingham, Ala., gave a resume of some new operations on surgery of the liver, which was a decided advance. Most of the other papers were confined to elementary sanitary matters, and were said not to contain many new facts. The opinion prevailed among authorities that excepting the work of Dr. Reed and one or two others, there was little that was new contributed to science by this Congress. While the Southern physician as a rule is originally well educated and trained in medicine, he is less progressive and less familiar with the researches of science than his Northern brother. The hospitals about Havana were very well conducted, contained all the modern appli-

ances, and the operations performed by some Havana physicians before members of the Congress showed great skill and expertness, but the average physician in the country towns and villages is not so far advanced. Dr. Hammond, my associate delegate, was elected as a member of the Executive Committee, with Dr. Gorges, Health Officer of Havana, and Dr. Vanderveer, of Albany, which was a pleasant recognition. Three evenings of the Congress were devoted to general addresses in the large theaters. Surgeon-General Wyman gave one address in English. The others were all Spanish, and were characterized by a rapid, emotional flow of words, delivered in a conversational tone; most of them without manuscript. In substance they were elementary and laudatory of themselves and others, and contained little that was new. Two other evenings were given to a concert and a ball. The great social event of the Congress was an excursion to one of the great sugar plantations forty miles from the city, and a dinner given by the proprietor. The very extensive fields of sugar-cane and the large mill for grinding, the palatial home of the proprietor, the magnificent orchard of all sorts of fruit, and the many other strange and unexpected sights, were surprises that made the occasion memorable. The richness of the country, the crudeness of the agricultural operations, and the poverty of the small farmers, were startling to a Northern visitor. The final closing event was a ball, which was Spanish in the best sense and associated with all the pomp, display, and dignity of the cities of the old world. As usual, most of the physicians from the States found more pleasure in sight-seeing than in listening to the voluble, wordy papers of the sections. The forts, public buildings, hospitals, and military camps, were visited and found to be in very good sanitary conditions, and the American army officers, both medical and military, were very cordial, and sympathetic in their efforts to make our stay agreeable. The impression prevailed that with the

abundant water-supply of Havana and improved system of sewage this should be one of the healthiest cities of the South. The equable climate rarely varying from twenty to thirty degrees throughout the year makes it an ideal place for invalids, and the possibility of living out-of-doors a very large part of the year confirms this impression. The isolation of medical men in these Latin countries is a large factor in accounting for their present status, and a congress of this kind brings them in touch with the bustling, progressive element of Northern medicine. The next Congress will be held at Bogota, in 1903, and will give an opportunity to become still better acquainted with these Latin countries and their peculiar diseases.

T. D. CROTHERS,  
W. L. HAMMOND.

SOME IMPRESSIONS GAINED FROM THE BRITISH MEDICAL  
ASSOCIATION.

It was my good fortune and pleasure this last summer to visit Europe and carry with me the credentials of this Society to the International Medical Congress held in Paris, but I was unable to attend the Congress without retracing my steps to some extent. I was, however, able to attend the sixty-eighth annual meeting of the British Medical Association held at Ipswich, England, which afforded me a great deal of satisfaction.

This Association, you will observe, is but about ten years older than our own American Medical Association, but in membership it is three times as large, numbering as it does nineteen thousand. The organization is composed of a "Council" which represents one to each hundred members and "one at large" from each of the colonies of England. This Council meets as often as necessary for the transaction of business, which is at least twice a year.

Knowing the large size and importance of this great

Association, and that this meeting was held so very near London,—only an hour or two's ride, it was a matter of very great surprise to me to find present during this time only a meager six hundred, or almost less than half of the smallest average attendance of our American Medical Association, and I may say briefly here, at the outset, that in point of interest and enthusiasm the same proportion existed. I may be rather too pessimistic, but I will confess at the outset that I was disappointed in the Association,—possibly the result of too high ideals, but at this time, nearly a year from my visit, and after a careful revision and analysis of my feelings, I am still unchanged in my views, which are, that the standard and progress of the English profession are not as high as the existing standards here. I am not unmindful of the great achievements of men in medicine and surgery which England has produced in the past, and of what the profession in this country owes to her; but it is a fact that she is not keeping up with the pace that American medicine and surgery is setting to-day.

I had supposed, since the proportion of the number of physicians and surgeons to the population is one-third less in England than it is in this country, that consequently the men were of a higher standard and better paid; this, however, I found not to be true. It may surprise some, and I think most of you, when I state on good authority that there are not fifty per cent. of the practicing physicians and surgeons of England who have the degree of "M.D.," and this is the basis of the distinction which I found there between "Mr." and "Dr." and not necessarily is it made a line between those practicing medicine and surgery; the latter, however, for the most part not having the title "Dr.," but "Mr."

I am satisfied that the people at large in the United Kingdom employ a physician less frequently than in this country, their average fees are less per visit, and certain-

ly the fees which some of our surgeons get for their work are absolutely unknown in England; a fact which all their surgeons admit and deplore.

To illustrate this, I will speak of an incident which occurred in going from London to Ipswich in which, chancing to be in the same compartment with two well-known London medical men on their way to the meeting, we fell into general conversation upon international matters and particularly those pertaining to the profession in our respective countries. Finally, one of them turned sharply to me and said, "Why, Doctor, how is it that you American physicians are able to leave your patients and travel so extensively as you do?" "Ah," said I, "we are very benevolent to our patients in America and only keep them sick ten months in the year, which of course enables us to have time and money to travel the other two months." I was prepared to make further explanation of the matter, but they said not a word nor was I able to observe a single scintillation or change in their countenance and I am even to this day in absolute ignorance of their impressions.

The Association in its work is divided into various sections very much as the American Association. Being personally interested in orthopedic surgery, I found that included in the section on the Diseases of Children. Some methods of tendon-grafting were brought forward as apparently new which have been in common vogue with us for several years. In the Section on State Medicine, "Tuberculosis and its Prevention," was the subject of quite a number of papers, which were discussed quite at length and with a good deal of ability. Isolation and the cottage system seemed to be the prevailing sense of the section. The interesting fact was brought out that tuberculosis in England was markedly on the decrease, and that this decrease was greater in the cities than in the rural districts.

The general address on Surgery before the entire Asso-

ciation was read by Mr. Frederick Treves, F.R.C.S., Surgeon Extraordinary to the Queen (and a score of other titles), the well-known writer, and easily the leading surgeon of London to-day, who came to the meeting direct from the seat of war in the Transvaal. His subject was the "Surgeon of the Nineteenth Century." I am sorry to say that his address, though very scholarly, was a great disappointment to all those whom I heard express an opinion concerning it, for he simply gave an encyclopedic history of surgery for a hundred years, dwelling at length upon the crude methods of pre-anesthetic days. I was of course much pleased that he gave America the credit for anesthesia. One comment which I heard upon the address impressed me as being not far from the probable fact, was that "This address could have been written equally well by an average newspaper man."

The most interesting or central social feature of the meeting was the annual dinner and banquet that was held in an average-sized hall which proved, however, large enough, for the attendance was much less than one-half that of the annual banquet of one of our State Societies, Massachusetts in particular, which I had the pleasure of attending some time since.

After dinner proper, the seven set toasts were responded to by ten speakers and occupied nearly four hours. In all these responses, only one speaker, and he from South Africa, attempted to illustrate a point by using our most common means, namely, an anecdote, and your humble delegate made himself unpleasantly conspicuous by being the only one in the hall who laughed. It is needless to say that thereafter I guarded well my emotional nature, but there proved to be no further occasion for so doing.

Of the various receptions, excursions and social functions which of course were of daily occurrence during the meeting, none was more enjoyable to me than that given

by Lord and Lady Beatrice Pretzman at Orwell Park, their estate, which is about six miles from Ipswich, and reached by a very pleasant carriage drive. This drive I had the pleasure of taking in a "dog cart" in company with a London physician and a lady.

As an illustration of what rather impressed me in my travels in England,—that upon matters outside of their daily routine, the profession, as well as the people, seem to be meagerly informed,—I am forced to recite a little of my experience with this Medicus. Reference had been made to the Passion Play then in progress at Oberammergau, which I had just visited, and to my great surprise his conversation showed that he was unaware that the Passion Play had been given prior to the present time. Finally he asked me the question directly, to which I replied; "It has not been produced very long, as they count time in your country, for even the Bavarian peasants of Oberammergau only claim to have produced it regularly for the last six or seven hundred years." Again I failed, by the closest observation, to discover a single expression or change of countenance on the part of my English brother.

It is needless to say that I returned to my own country and State with a continued admiration for the profession whom I had met abroad, but with a greatly increased satisfaction with the position which our fraternity occupies not only in the minds of those outside of our borders, but especially as regards our relations and standing with our own public.

JOSEPH E. ROOT.

After the report on the Progress of Medicine by Dr. Defendorf and Dr. Bartlett, the appointed time having arrived, the President read his Address, Medicine in the Nineteenth Century, with a Glance into the Twentieth, and the Convention immediately adjourned.



## THE AFTERNOON SESSION

began at two o'clock.

Dr. Howe opened it with a clinic exhibiting a patient with extensive fracture of the brain.

Dr. M. M. Johnson, in reading his paper "The Treatment of Ventral and Umbilical Hernia," presented a number of patients upon whom he had operated with excellent result.

The Dissertation, "Ectopic Gestation," was read by Dr. Tingley.

Dr. Wolff took the opportunity of showing a pathological specimen—a tumor removed that morning at St. Francis' Hospital. The woman entered the Hospital about a week ago. She had an abdominal tumor which could be easily felt, was movable and nodulated. For many years she had had pain at all times; had been married for twenty years. This pain finally became so extreme that she could not work and after consultation it was thought best to remove the mass. After exploring the tumor was found to be so intimately connected with the uterus that a hysterectomy was necessary. The mass was a fibroid undergoing degeneration, colloid in character. It was intimately connected with the uterus, forming indeed, a part of the organ.

After this Dr. Ring read "The Relation of Headaches and Eye-Strain."

Other papers were called for but their writers not being present, Dr. Lawson finished the program with "What Shall We Do With the Mosquito?"

The papers printed, with others which were received too late for appearance upon the program, were read by title and referred to the Committee on Publication. They are:

"Sarcoma of the Duodenum," W. L. Barber, Waterbury.

"Three Cases of Appendicitis Complicating Pregnancy," S. B. Overlock, Pomfret.

"Adenoids," R. W. Kimball, Norwich.

"A Case of Fracture of the Spine with Recovery," J. E. Root, Hartford.

"Treatment of Thirty Cases of Pott's Disease in Private Practice," C. A. Tuttle, New Haven.

"The Ultimate Result of Hysterectomy for Cancer," P. H. Ingalls, Hartford.

"The Relation of Headaches and Eye-Strain," H. W. Ring, New Haven.

"Headaches, with Report of Cases," G. J. Holmes, New Britain.

"The Clinical Significance of Headache," G. Eliot, New Haven.

"The Treatment of Ventral and Umbilical Hernia," M. M. Johnson, Hartford.

"A Tumor of the Kidney," F. P. Clark, Danbury.

"The Resources of Modern Gynecology," Frederick Schavoir, Stamford.

"Treatment of Dysmenorrhea," R. C. Downey, Middletown.

"A Plea for State Care for Tuberculosis Patients," W. E. Fisher, Middletown.

"The Prevention of Consumption," C. E. Munger, Waterbury.

"Middle Ear Disease and Intracranial Complications," A. B. Coleburn, Middletown.

"The Pathies," M. C. Hazen, Haddam.

"A Case of Paranoia," J. M. Keniston, Middletown.

"Alcoholic Psychoses," C. E. Stanley, Middletown.

"Prophylaxis versus Therapeutics," F. E. Potter, Portland.

"Modern Therapy," Kate C. Mead, Middletown.

"Therapeutic Notes on Several New Preparations," J. H. Mountain, Middletown.

"Diphtheria," J. H. Mountain, Middletown.

"The Etiology and Prevention of Endocarditis," J. R. Poore, Waterbury.

"The Etiology of Dissection and Operation Wounds," L. W. Bacon, Jr., New Haven.

"A Case of Acromio-Clavicular Dislocation and its Treatment," B. E. Henrahan, New Haven.

"Neurasthenia," (1) "The Etiology and Pathology," G. Eliot; (2) "The Diagnosis," W. L. Barber; (3) "The Medicinal and Hygienic Treatment," R. E. Peck; (4) "The Mental and Hypnotic Treatment," J. P. C. Foster.

"Statistics of One Thousand Consecutive Births in Private Practice," J. E. Stetson, New Haven.

"The Treatment other than Surgical, of Hemorrhoids," W. J. Delaney, Naugatuck.

"Myelogenous Leukemia," A. A. Crane, Waterbury; With Pathological Report, J. R. Poore, Waterbury.

"Anesthesia and Anesthetics," H. Strosser, New Britain.

"Mental and Physical Culture in our High Schools," F. T. Simpson, Hartford.

"Etiology and Treatment of Sub-Acute Rheumatism," T. S. O'Connell, East Hartford.

"The Surgical Treatment of the Peritoneum," A. J. Wolff, Hartford.

"Gun-Shot Wounds of the Brain," H. G. Howe, Hartford.

"Typho Malarial Fever," E. K. Root, Hartford.

"What shall we do with the Mosquito?" G. N. Lawson, Middle Haddam.

"The Artificial Feeding of Infants," R. S. Goodwin, Jr., New Haven.

"Pneumotomy, with Three Cases," O. C. Smith, Hartford.

"Intraspinal Injection of Cocaine for the Purpose of Producing Anesthesia," G. R. Shepherd, Hartford.

"Some Observations on Surgery," W. W. Hawkes, New Haven.

"The Physician in General Literature, Julian LaPierre, Norwich.

"The Fairfield County Medical Association in Fiction," L. T. Day, Westport.

"Ophthalmia Neonatorum," W. T. Bacon, Hartford.

The annual Convention adjourned at 4:30 P. M.

N. E. WORDIN,

Secretary.

## ADDENDUM.

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The reception given Wednesday evening by the Hartford Medical Society was informal and exceedingly pleasant.

The attendance during the business meeting of Wednesday was as great as at any of the several sessions, an unusually large number being present. The entire Annual Meeting and Convention was the largest and most varied of any in the history of the Society, excepting of course, the Centennial. About thirty went Wednesday afternoon on invitation of the Berlin Pharmacal Company to visit their works at East Berlin. On Thursday afternoon as many more went to inspect one of the milk farms which is carried on under the direction of the Hartford physicians. At the Thursday afternoon meeting a number of patients were exhibited in connection with the papers read and all the papers presented, with one exception, were fresh and prepared for this meeting. But the greater need is discussion on the papers presented.

The banquet at the Hotel Hartford on Thursday evening fittingly closed the one hundred and ninth annual meeting. On this occasion Dr. Ingalls acted as toastmaster, introducing His Excellency, Governor McLean, who responded to the toast "The State of Connecticut;" Dr. L. B. Almy, to whom was assigned the sentiment, "The Connecticut Medical Society; Mr. Charles Hopkins Clark, of the Hartford Courant, who wittily spoke for "The Press"; Hon. Charles E. Gross, for "The Bar"; Rev. Joseph Waite, for "The Pulpit," and Dr. J. O. Marble, of Worcester, Mass., who very acceptably represented the Massachusetts Medical Society.

The following letters, received by the President, explain the reason and the purpose for appointing two of the special committees of the year:

SONYEA, N. Y., July 30, 1900.

*Leonard B. Almy, M.D., President Connecticut Medical Society,  
Norwich, Conn. :*

DEAR SIR:

In view of the large and increasing number of epileptics in the United States, whose unfortunate and neglected condition awakens the sympathy of every humane person, earnest efforts are now making by the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics to secure suitable provision for this class in States not having such provision. In the attainment of this end the co-operation of your Society and other benevolent agencies is solicited.

At a meeting of the Executive Committee of the Association, held at the Academy of Medicine in New York City, June twenty-first, 1900, the condition of epileptics in your State was a subject of consideration, and the Secretary was requested to write you and respectfully suggest that your Society appoint a committee to ascertain the number and condition of epileptics under public care in the various institutions of your State, and also to procure such information as is obtainable respecting the number of epileptics not under institutional care, and report them to your Society. The last-named work has been accomplished with tolerably satisfactory results in some States through correspondence with local medical practitioners. Such information it is believed would be of great value to your Legislature and to this Association in the prosecution of its work.

It has been decided to hold a meeting of the Associa-

tion in the City of Washington in the spring of 1901, the precise date of which will be announced later.

I am, yours with great respect,

WM. P. SPRATLING,

*Secretary of the National Association for the Study  
of Epilepsy and the Cure and Treatment of Epileptics.*

The objects of this Association are as follows:

1. To promote the general welfare of sufferers from epilepsy.
2. To stimulate the study of the causes and methods of cure of this disease
3. To assist the various States in America in establishing a uniform system of care for epileptics.
4. To advocate the care of epileptics in institutions designed for their especial needs, where they may (a) Receive a common school education; (b) Acquire trades; (c) Be treated by the best skill for their malady.

749 MADISON AVE., NEW YORK CITY,

June 20, 1900.

*Dr. L. B. Almy, President of Connecticut State Medical Society :*

DEAR DOCTOR:

It is the earnest desire of the Committee of Revision of the United States Pharmacopœia that no effort shall be spared which may make the next revision, which is now in progress, thoroughly representative of advanced medical and pharmacal science. To that end the Committee wishes frank and explicit expressions of opinion as to what substances and preparations should be dropped from the present, and what should be added to the next, Pharmacopœia. Specific statements, rather than general criticisms, are desired. If your Society has no Pharmacopœial Committee, you can aid the Revision Committee by appointing a Pharmacopœial Committee ad interim, choosing such, from your knowledge, as are

interested in scientific medicine, and direct it to report not later than November first, 1900.

If such a Committee has been appointed, will you kindly direct its Chairman to report to the undersigned before the date above given?

Yours very truly,

REYNOLD WEBB WILCOX,

*Sub-Committee on Scope and Statistics, Committee of  
Revision, U. S. Pharmacopœia, 1901-1910.*

The Chairman of the Committee on Revision of the By-Laws, Dr. G. C. Segur, Hartford, requests that any desired changes in the By-Laws or any suggestions concerning the same, be sent to him. Every member may thus be heard and the work of the Committee be helped.



PRESIDENT'S ADDRESS.



## PRESIDENT'S ADDRESS.

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THE NINETEENTH CENTURY IN MEDICINE, WITH A GLANCE  
INTO THE TWENTIETH.

"God is my witness and men are not ignorant of it, that I have labored more than forty years to throw light on the art of Surgery and to bring it to perfection. And in this labor, I have striven so hard to attain my end, that the ancients have naught wherein to excel us, save in the discovery of first principles; and posterity will not be able to surpass us (be it said without malice or offence), save by some additions, such as are easily made to things already discovered."\*

Reading this surprising statement, made by the great Ambroise Paré over four hundred years ago, the idea occurred to me that it might be interesting to tabulate some of the slight "additions" which have come to us in the past hundred years, and at this, the first meeting of the Twentieth Century, make a sort of inventory and take account of stock on hand, and in prospect.

Approximately the same statement is said to have been made by the great English surgeon, John Erichsen, on his visit to this country a quarter of a century ago, but I hardly think that any one would be so rash as to say to-day, what "additions" might be made to our knowledge of the healing art in the century to come.

On the other hand, an eminent New York surgeon, not a great while ago, remarked, apropos of something quoted as authority:

"Why that is ten years ago. There is nothing in medicine ten years old, which is up to date to-day."

I shall in this desultory address confine myself quite

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\*Dedication to Opera Omnia. Ambroise Paré, 1585.

closely to medicine and surgery in the United States during the past century, for I find that we, on this side of the "ferry," have done more than our share in the "additions" to our medical knowledge, and we may read with amusement, Sydney Smith's query in the Edinburgh Review of seventy years ago:

"In the four quarters of the globe, who reads an American book, or goes to an American play, or looks upon an American picture or statue? What does the world yet owe to American physicians or surgeons? What new substances have their chemists discovered, or what old ones have they analysed? \* \* Who drinks out of American glasses or eats out of American plates or wears American coats or gowns, or sleeps in American blankets?"

To-day we can answer, the four corners of the globe all do these things.

Let us go back to the beginning of the century, and see what the condition of medicine was then. There were only three medical schools in the country at the time when the last century was new, and the embryo physician learned his art from some more or less famous doctor of his day.

To-day I find that the physicians, enrolled in Polk's Directory, graduated from three hundred and fifty medical schools, and all but three started, and some of them ended, in the nineteenth century. But, in the early days, when they wrote 1801, the young man desirous of acquiring knowledge of the healing art, attached himself as an apprentice to some practitioner, as famous as his means would allow; and as far as his license to practice went, it made no difference whether he were the student of Benjamin Rush or Elisha Perkins. During his apprenticeship, he occupied a peculiar position in the family of his preceptor,—half servant, half student. He made pills and powders, tinctures and infusions. His was the hand which held the bowl when a patient was

bled, and he assisted at all operations which were performed by his preceptor. Between times he swept the "Surgery," cleaned bottles, and carried the medicines which he had prepared for the master's patients. If a dinner were given, he acted the part of footman in the hall, to announce the guests, as did the famous John Warren, in his apprentice days. In his leisure moments, which must have been few and far between, he studied such works as he might find in his master's library, and in the dead of night he might have been heard, if not seen, at his task of procuring anatomical material from the graveyard.

Meanwhile he listened to words of wisdom from his teacher, while they were riding around the country side, as he related cases, or described the "humors" and "vapors" which caused various diseases, explained the variations of the pulse, or told him of the new treatment of cancer by the use of arsenic. His medicines were opium, antimony, bark, mercury and steel filings, and the various seeds, herbs and barks, strings of which hung in the attic, and being prepared *secundem artem*, formed boluses and decoctions; while his most potent anesthetic was Jamaica Rum. After his apprenticeship in his native land, the student, if he had the requisite means, took a course abroad under the famous English and Continental Surgeons, as did the illustrious McDowell.

We, of 1901, may smile at our grandfather in medicine, in the light of our superior knowledge, but he learned only a few things, and if he were an attentive student, he learned them well, for the teaching of those days was what we have returned to—that is, bedside teaching, and his early mistakes and errors in diagnosis or treatment were corrected by the master. He was taught how to know disease when he saw it, and in the rude fashion of the day, how to treat it; which was more than some students learned fifty years later.

It was said, you know, some years ago, that Vienna

was the best place in the world to study disease, "for they always confirmed their diagnoses by a post-mortem."

The lancet was used, and abused, but it is to be questioned whether the plethoric farmer, with pneumonia a hundred years ago, did not do better; he certainly got well as often, under bleeding, as he did in later years, under the treatment by stimulation. The abuse of bleeding caused its disuse, until I would be willing to hazard that nine-tenths of this body of physicians never saw a man bled. I remember, in my student days, the great Austin Flint, at a clinic, said: "In my opinion this patient should be bled; Doctor you bleed him," to the house physician. The young man looked a little non-plussed, and upon inquiry, he acknowledged that he had never seen any one bled, but believed that he had an indefinite general idea, of how it should be done.

In those days, the nosology of Cullen was in vogue, and disease were classified into orders, classes, genera and species, about thirteen hundred and eighty different ones; but through the more advanced views of Rush of Philadelphia, this complicated method of teaching began to disappear, and our present ideas on the subject commenced to be known.

They had quacks then, as we have now. Perkins's tractors were at the height of their popularity, and I can show you testimonials as to their efficacy, from the eminent men of Connecticut of that time. Most of you never heard of them—such is fate. They cured everything then, just as a host of quack medicines do to-day. Homeopathy was brand new, and was to some a relief from the nauseous doses of our forefathers.

Animal magnetism had begun to be known, the forerunner of Hypnotism and Christian Science, and early physicians spoke boldly against the "quacks and Empirical pretenders" of their day, and the Legislators believed them, just as much as they believe us now, when we try

to help the public, and incidentally spoil our business, by keeping out quacks, et id omne genus.

We can hardly realize the growth of medicine in the last century. Pathological Anatomy began with Morgagni and was developed by Rokitansky, Virchow, Cohnheim and others, until it had to be modified in accordance with Bacteriology. Recamier re-discovered the speculum in 1801, and gynecology was born. Physiology was nearly new, but Hammond, Dalton, Flint, Weir Mitchell and others, grappled with the problems of life, with a marked amount of success. The reflex action of the nervous system is said to be the greatest physiological discovery since Harvey demonstrated the circulation of the blood. The secrets of digestion and assimilation have been disclosed, though lately we have had our ideas "jarred," when we find that a man can live after the removal of his stomach. The ophthalmoscope, microscope, laryngoscope and all the other "scopes" have appeared to help us in our knowledge of disease.

The great discovery of vaccination belongs to the previous century, but it was only five years before the nineteenth century began, in 1796, that Dr. Waterhouse, of Cambridge, vaccinated his first patient, who, I believe, was his own child, and it was performed again by Dr. James Jackson, of Boston, whose "Letters to a Young Physician" is a classic, whose advice might be of advantage to the young physician of to-day. He believed thoroughly in the conservation of nature's forces, and to a large extent the medical profession of New England was moulded by his precepts and example. In those days of empirical medication, it seems strange to listen to the words of our great Connecticut surgeon, Nathan Smith, who in his essay on Typhus Fever, published in 1824, says: "I have never satisfied that I have cut short a single case of Typhus that I knew to be such. Typhus has a natural termination, like all other diseases, which arise from specific causes. All that is required

are simple diluent drinks, a small quantity of farinaceous food, and an avoidance of all causes of irritation." What Dr. Smith called Typhus, was undoubtedly Typhoid Fever, for the distinction between the two diseases was first recognized by Dr. W. W. Gerhard, of Philadelphia, in 1837.\* In stating this distinction let us bear in mind, that through our improvements in sanitation, Typhus Fever has become in this country one of the rarest of diseases. For many years Yellow Fever ravaged our coasts, and Dr. Dewees, of Philadelphia, about the middle of the century, asserted and maintained that the disease was not contagious, in the ordinary sense of the term. This, as you well know, has been thoroughly demonstrated by the experiments in Cuba recently. We all thought Yellow Fever was acquired, either by contact with a patient or by living in infected dwellings. My first knowledge that this was not the case came from the lamented Dr. T. O. Summers, who had charge of the Yellow Fever camp at the time of the Memphis epidemic. He stated that, from his large experience, he knew that nothing about the yellow fever patient would carry the disease to another. He thought that the contagion was developed in the clothing and wall hangings. I could hardly believe him, but when, after the Spanish-American War, we had at Camp Wikoff, some seventy odd cases of imported Yellow Fever, who were carried in the same ambulances, that an hour later were loaded with other patients, or even with a side of beef for the hospital, and not one case of Yellow Fever developed on Long Island; not a doctor, nurse or ambulance driver contracted the disease, we were surprised and delighted, but, until the work of the Yellow Fever Commission in 1900, the immunity of our Camp remained to us a mystery. The wind blew at Montauk, the weather was cool, and the "culex fasciatus" did not flourish.

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\*Am. Journal of Med. Science, Vol. xix p. 289.



We have lately found also that another kind of mosquito, the *Anopheles*, is the carrier of malaria. It has occurred to me, that a preventative of both these diseases might be had in the "tarring up" used by sportsmen and guides in the woods, where insects abound. Covering the face and hands with a preparation which is distasteful to the mosquito will keep him, (or rather her,) from biting one, and there will be no contagion.

The treatment of Pleurisy with effusion had been among the "*opprobria medicorum*," until Dr. Morrill Wyman, of Cambridge, tapped a patient with an exploring trocar and canula, to which he attached a suction pump, the first aspirator.\* To Dr. C. S. Pennock, of Philadelphia, we are indebted for the flexible stethoscope, which was improved by Dr. Cammann, of New York, making it binaural. Dr. Austin Flint first in this country, at least, called the attention of the profession to the variations of pitch on percussio in diseases of the chest, and his essay on the subject received the prize of the American Medical Association in 1852, while the priority in auscultatory percussio, in mapping out the borders of the heart, belongs to Dr. Alonzo Clark, of New York.†

Dr. Horace Green, before the laryngoscope came into use, demonstrated that the larynx could be invaded by instruments, and paved the way for O'Dyer and intubation.

In 1822 Dr. Jacob Bigelow, of Boston, published his paper on "*Self-limited Diseases*,"‡ of which it has been said, "It can be read in an hour, but the influence would last a century."

One of the greatest contributions to our knowledge was given us, when Dr. Oliver Wendell Holmes wrote his article on the "*Contagiousness of Puerperal Fever*."||

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\*Woods's *Theory & Practice of Medicine*, Vol. 1, p. 269.

†N. Y. Med. Journal, July, 1840.

‡Mass. Med. Soc. Comm. Vol. III.

||N. E. Journal of Med. & Surgery, April, 1843.

To him should be credited the lives of thousands of women, who otherwise would have died from infection, brought to them by their trusted physicians. He should be famous for this, even though his literary fame has overshadowed it.

The case of Alexis St. Martin, who was lucky enough to fall into the skillful hands of Dr. William Beaumont of the Army, gave us all that was known of stomach digestion until lately.†

The great discovery of the century was of course Anæsthesia, and again we are indebted to Dr. Holmes, who coined the name.

In your beautiful park is a statue of Horace Wells, who was the first, in this part of the country at least, to do any operation painlessly. For major operations, ether was first brought to the notice of the profession by Morton, who demonstrated its value.

The Dr. Long, of Georgia, whose operations antedated that performed by Warren in the Massachusetts General Hospital in 1846, did not give his knowledge to the world, and as Sydney Smith wittily says, "He is not the inventor, who first says the thing, but he who says it so long, loud and clearly, that he compels mankind to hear him."

Even chloroform may be said to belong to this country, for it was discovered by Samuel Guthrie, of Sackett's Harbor, N. Y., in 1831.

You all know that the discovery of ether as an anæsthetic, opened up vast fields in surgery, which were before unknown. We, of to-day, find it difficult to realize what operating was before anæsthesia, when speed was the "sine qua non" of a surgeon.

Since the first discovery, numerous volatile substances have been used as anæsthetics, but the fact remains that the old original nitrous oxide gas and ether are the safest and best anæsthetics of the present day. In 1847 Simp-

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† The Physiology of Digestion by Wm. Beaumont, U. S. A., 1833.

son, of Edinburgh, used chloroform, and that is the English and Continental anesthetic, and is used mainly in Military Surgery on account of the small amount required.

In 1885 Leonard Corning showed the method of using cocaine by injecting it in the neighborhood of the spinal cord; and in these later years, this method of producing anesthesia in operations below the diaphragm has been quite extensively employed, but Professor Paul Reclus has collected seven or eight cases which proved fatal, and there are various unpleasantnesses connected with its use. Most of us remember when the rectal administration of ether was thought to obviate the difficulties of oral administration, but no one uses it to-day.

Local anesthesia has been produced in various ways since Koller gave us cocaine. The production of anesthesia by freezing mixtures has been largely used, and we have lately found that the best of local anesthetics, chloride of ethyl, is also a general anesthetic for operations of short duration, or as a preparatory step in giving ether.

Good work was done by the surgeons of the early part of the century, for they had bold and skillful operators in the by-gone days, when the patient was strapped to the table, and the surgeon did his work with the groans and cries of the patient wringing in his ears.

Think of Valentine Mott, at thirty-five years of age, cutting down upon, and tying the innominate artery, for the first time in the history of man, in 1818—or Ephraim McDowell in his Kentucky village, performing the first ovariectomy in 1809. If McDowell had never lived, Connecticut might have had the honor of being the place where the operation was first performed, for Nathau Smith, of New Haven, followed McDowell, unknowingly, and removed an ovarian tumor in 1821.

The first operation where the common carotid artery was ligated in two places, in this country, was right here

in Hartford by Dr. Mason Fitch Cogswell in 1803.\* Dr. Albert Smith, of Dartmouth, N. H., antedated Sir Astley Cooper by eight months in tying the primitive carotid for secondary hemorrhage in 1807.

At the Centennial meeting of this Society, some years ago, the history of the operations performed by the members of the Society in the early days—Smith, Knight, Thomas Hubbard and others was given by the essayists of that meeting, and it will not be necessary to repeat what was told at that time. I will try therefore to give only a glance at some of the most important occurrences in medicine and surgery:

In 1817 Sir Astley Cooper ligated the abdominal aorta and I believe that the late Dr. Hunter McGuire was the only American surgeon to follow his example with the same result.

We may note that the first successful case of the cure of aneurism by digital compression was in the practice of Dr. Knight, of New Haven.||

The metallic ligature for arteries is our American device, and its innocuousness was demonstrated by Dr. Henry S. Levert, of Mobile, Alabama.‡ The practice of employing animal ligatures originated with Dr. Physic of Philadelphia, early in the last century. Buckskin, French kid, parchment and the sinews of deer, the forerunner of kangaroo tendon, were all used by American surgeons.

The admirable contrivance of Dr. Lewis A. Sayre, of New York, for fractured clavicle, is famous all over the world, though Von Eschmarch gives a faulty description of it, and shows it wrongly applied in an illustration.§ The various appliances of American surgeons, for the treatment of fractures, are too numerous to mention. Though of old surgeons attempted to reduce dislocations by ma-

\*N. E. Journal of Med. and Surg. Vol. XIII. p. 351.

||Am. Journal of Med. Science, July, 1848.

‡Am. Journal of Med. Science, October, 1859.

§Eschmarch's Surgeon's Hand Book, p. 80.

nipulation, it was to Bigelow, of Boston, that we are indebted for instruction in its successful use.

To speak of fractures without mentioning the X ray of Roentgen, would be without excuse, and although the discovery was "made in Germany" it has been developed largely in this country. It has its advantages and limitations, and is too familiar to all for further comment.

The successful wiring of the two ends of an ununited fracture was first done by Dr. J. Kearny Rogers, of New York.\* The most common method of amputation to-day was the idea of Dr. Stephen Smith, of New York, superseding the old flap operation of pre-anesthetic days.

The first successful case of paracentesis for hydropericardium occurred in the practice of Dr. J. C. Warren, of Boston.†

In 1867 Dr. Willard Parker, of New York, published his researches on what he called Perityphlitis and advocated opening the abdomen "not earlier than the fifth or later than the eleventh day."‡ In connection with this disease, which we know now under a different name, and I understand that a new term has been recently suggested, let me state, as showing the increase in that portion of our knowledge in the past twenty-five years, that when I first graduated, the great system of surgery was that of Thomas Holmes, of London. In the whole ponderous five volumes, the words perityphlitis, appendicitis, or epityphlitis cannot be found, and the only reference to anything of the kind, is a few pages, in which it is stated that fecal abscesses occasionally occur in the right groin, and a case is described which will pass for one of neglected appendicitis. Ten years later the first American System of Surgery appeared; an exhaustive treatise by Ashurst, of Philadelphia, and no mention of appendicitis is found, and only a page and a half is devoted to

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\*Med. Record, Vol. II., p. 25.

†N. Y. Med. & Phys. Journal, Vol. VI., p. 521.

‡Smith's Surgery, Phila., 1863, Vol. II., p. 358.

the consideration of perityphlitis. The word appendicitis is not in the Century Dictionary.

Ten years more pass, and in Dennis's System of Surgery some eighty pages are given up to appendicitis alone, and the literature on the subject is more than voluminous.

It is a matter of some question as to the increasing frequency of this, now fashionable disease. Some writers claim that patients used to die of "inflammation of the bowels," whom we would now save by appendectomy. This is doubtless true, but I am sure that most of us see more cases of appendicitis in a year, than died of inflammation of the bowels in our practice in the ten years previous to 1885.

The etiology of the disease is not thoroughly known today. The bicycle came into vogue about the time that the vermiform appendix began to be interesting, also the "grip." Possibly in the advance of civilization, the little organ, which is such a source of revenue to us surgeons, is undergoing atrophy, and as its blood-supply diminishes, it is more apt to take on gangrenous degeneration than it did in our fathers' days. However I am not reading an article on appendicitis, so I will say no more on that subject.

The operation of perineal section, for the relief of the cystitis dependent on hypertrophy of the prostate gland, was suggested by Mr. Guthrie, of London, but he never performed the operation. His ideas were accepted by Dr. Willard Parker, who successfully operated in 1846.\*

The first nephrectomy was performed by Walcott, of Milwaukee, and the first cholecystotomy by John S. Boggs, of Indianapolis, on June fifteenth, 1867, with success.

The second great discovery of the century was due not to an American surgeon, but to one of our cousins on the

\*N. Y. Journal of Med., July, 1871, p. 83.

other side of the water. When Sir Joseph Lister showed the world that suppuration, septicemia and all the wound infections were preventable, surgery made another enormous leap forward.

Anesthesia gave us certainty in operating without the struggling of the patient, but often "the operation was a success, but the patient died" a while afterward, while the suffering attending the healing of wounds was intense.

At first, not all surgeons accepted the new idea, as mark the dictum of the great Philadelphia Surgeon Gross in 1876, just after Lister had demonstrated his methods at the International Medical Congress of that year. "Little, if any faith is placed by any enlightened or experienced surgeon, on this side of the Atlantic, in the so-called carbolic acid treatment of Professor Lister, apart from the care taken in applying the dressing; or what is the same thing, in clearing away clots from the wound and excluding air."\* After which he advises dressing wounds with lint or cotton soaked in olive oil. I think not.

You older Surgeons all remember the days, which seem not so very long ago, when we washed our hands after, not before, an operation; when if the silk did not thread properly, we moistened it with saliva, and twisted it with our fingers; when we carried our instruments in velvet lined cases, which were dusted, once in a while; when balsam of Pern was our nearest approach to anything antiseptic, and union by first intention was a thing to be remarked upon. I can see as yesterday, my preceptor, Dr. James R. Wood, the great little man of New York, whose excision of the lower jaw for phosphorus necrosis, with its subsequent complete reproduction, stands, I think, as a unique success to-day; as he would hold his scalpel crosswise in his mouth, when he needed both hands for manipulative purposes. He never thought

\*A Century of Am. Medicine, 1876, p. 213.

or heard of the Klebs-Loeffer bacillus which sometimes lurks in the buccal cavity. My first operations were done when we used silk—not sterilized, for ligatures, and we left one end about six inches long hanging out of the dependent portion of the wound, and the ligature of the main artery had both ends long, tied together by a knot; a most admirable contrivance for the entrance of any micro-organisms, who might wish, from curiosity, or otherwise, to climb into the wound.

Then we used to be pleased if we found what was called "laudable pus," while to-day no pus is laudable, but shows anything but laudable technique on the part of the surgeon. I am telling this, not to you older men, but to the younger members of our Society, that they may appreciate the great advances made by first anti-sepsis, and later by the sister discovery, asepsis. Later Bacteriology came to show us the causation of the infection, and words which would have been meaningless to our preceptors, if they could come back from the place where they have been for the past twenty-five years, we use constantly to-day. The names of the various bacilli, cocci, spirillae, et al., would have been as Choctaw to them, and I can picture to myself the amazement of my old preceptor, if he could see the surgeon of to-day invading every great cavity of the body, probing the brain, or excising tumors therefrom; extirpating kidneys and spleens; placing the severed ureters into the bladder or intestine; opening the abdomen, simply to see what was the trouble inside, even suturing the heart wall itself.

Verily the art of surgery marches fast and wears out many shoes meantime.

The subject of bacteriology would require a paper by itself, and the names of Pasteur, Koch and Cohn are familiar to physicians of to-day, and we have had to re-learn our pathology. Anthrax, Tetanus, Pneumonia, Cholera, Typhoid, Diphtheria, and other diseases, all have their specific germ, and I believe lately the bacillus



of cancer has been discovered by Dr. Gaylord, of Buffalo; while in surgery we chase the illusive cocci from the infected wound.

The discovery of the antitoxines was made possible by bacteriology.

There is another branch of the surgical art, which some of our friends claim as their especial province; and although Dr. Deaver, of Philadelphia, at the last meeting of the American Medical Association, said that he did gynecological operations because they were so "dead easy," we must acknowledge that American Gynecology is America's greatest success.

In point of fact, the study of diseases of women began with the last century, with the re-discovery of the speculum, but some of the physicians of the early part of the century did surprising work.

Dr. George Clark, in 1806, extracted the fetus of an extruterine pregnancy, by introducing his hand into the rectum, and delivering through the rectal wall.\* In 1809 Dr. Ephraim McDowell did his great operation, which called forth from the *Medico Chirurgical Review* these remarks: "A back settlement of America, Kentucky, has beaten the mother country, nay Europe itself, with all the boasted surgeons thereof, in the fearful and formidable operation of gastrotomy, with extraction of the ovaries." This was the truth, but such was not the belief of the writer, and it should be labelled "N.B.—This is sarcasm," as will be seen when we read the rest of the statement: "Our skepticism, and we must confess it, is not yet removed." The history of ovariotomy has been given again and again; how it was denounced as murderous, and an unjustifiable operation. Many of us remember when the same was said of hysterectomy, and no successful case was performed in New York City up to 1876. Mark the beginning of asepsis.

The operation of the removal of ovarian tumors, it was

\**Phila. Med. Museum*, 1806, Vol. II., p. 292.

estimated, had directly contributed more than thirty thousand years to the life of woman, when Peaslee wrote twenty-five years ago. How many more thousands of years have been given to the long suffering sex since the introduction of asepsis and improved technique in the last twenty-five years, no man has attempted to compute.

In 1816 Dr. John King, of South Carolina, performed a remarkable operation for abdominal extra-uterine pregnancy at full term. The head presented in the pelvis, and cutting through the vaginal wall, he applied the forceps and succeeded in saving both mother and child.\*

The name of Hodge, who practiced in Philadelphia from 1818-1873, is connected forever with the pessary which he designed.

About the middle of the century in Alabama the great gynecological light appeared, and J. Marion Sims wrote his brochure on the successful treatment of Vesicovaginal fistula, which up to that time had been an incurable affliction. The story of his trials and disappointments in his attempts to cure this loathsome trouble, reads like a novel. He operated on one patient thirty times without anesthesia, and finally succeeded in obtaining a successful result.

The speculum, which he invented, made vaginal operations possible, which could not have been done with the specula of former days.

The value of this discovery is shown by the fact, that in spite of all the modifications of that instrument, the original speculum of Sims is practically the one we use to-day. The history of his struggles to gain a foothold in New York City is pathetically interesting. He finally started the Woman's Hospital and then, the Civil War breaking out, he went to Europe, where he spread the fame of American gynecology throughout the world. To Sims also belongs the precedence in discovering the cause and treatment of Tetanus Neonatorum. One of

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\*Med. Repository, 1817, Vol. III., p. 388.

the strangest things about the man, is that he had greatness thrust upon him by fate, for the one part of surgery, which he most disliked, in his earlier days, was the treatment of diseases of women.

In 1870 T. Gaillard Thomas performed vaginal ovariectomy. This was the first time that this operation was ever advised or performed. His patient recovered.\* His example it is needless to say has been repeatedly followed.

Robert Battey, of Atlanta, removed the ovaries, with the object of producing an artificial menopause, in 1872.† This operation became fashionable soon after, and was performed many times for insufficient reasons, and has fallen somewhat into disrepute.

Dr. T. A. Emmet, the friend and colleague of Sims, in 1874 advocated and performed the operation, now so common, for the repair of a lacerated cervix. The various operations, which may perhaps be classed as variations of cesarian section have been successful in the hands of many operators, the gastroelytrotomy of T. Gaillard Thomas being the first in this country, in 1870.‡

The first hysterectomy for fibroids was performed by Burnham, of Lowell, Mass., in 1854, and the operation was successful.§ The operation was for sometime considered to be not sufficiently successful to be advised by conservative surgeons, while to-day, you can see the operation performed any day in one of our large cities.

To recount the improvements in operations in the last ten or fifteen years would take up too much time, and you all know the story as well as I.

There is now no cavity of the human body, which is not invaded by the knife of the surgeon, and people are giving up their viscera without much apparent trouble.

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\*Am. Journal of Med. Science, April, 1870, p. 387.

†Atlanta Med. & Surg. Journal, Sept., 1872, p. 32.

‡Am. Journal, Obstetrics, Vol. III, p. 125.

§Bost. Med. & Surg. Journal, May, 1855, p. 249.

Stomachs, kidneys, intestines and so forth are apparently useful, but not necessary portions of our anatomy.

What we now do in surgery and gynecology would be impossible without another great discovery, or invention, the trained nurse. Dr. Oliver Wendell Holmes foretold her advent in 1867, but she first made her appearance in this country in 1873, when Sister Helen came to Bellevue Hospital.

To the trained nurse we owe a great deal of our success in the past few years. The old "Sairey Gamp" type of nurse who called a catheter a "caster" and spoke of a "chromo" state has passed away, and in her place we find the trim, clean and helpful nurse from one of the numerous training schools. A New York surgeon says that if he had to make his choice, he could get along without his clinical assistants better than he could without his nurses.

We have seen so far, some few of the things, which the past century has given us; let us acknowledge our limitations. Cancer, for which it was fondly hoped, at the beginning of the century, that a cure had been found in Arsenic, has increased markedly as the century wore by. The "White Plague," as Tuberculosis has been called, is still the most frequent cause of death among us to-day. Pneumonia claims its victims with the same regularity as in the earlier days. Typhoid fever made the same havoc with our army during the Spanish-American War, and among the English in South Africa, that it did in the Civil War; and the recent epidemic in our sister city shows that our boasted sanitation is somewhat at fault.

We have had in the last ten years a visitation of a disease which appeared here early in the century, to disappear again for years, but now it seems to have come to stay; and we are as helpless to stay the ravages of the "Grip," as our fathers and grandfathers were. The old plague, which devastated so many cities in past cen-

turies is pan-demic, and even the resources of the sanitary officers cannot seem to rid us of it. Mental and nervous diseases are more frequent than ever before. Surely there is work for physicians in the twentieth century. Can we look ahead and see what changes may take place in the coming years?

The fashionable treatment of disease, toward which we are tending, seems to be by antitoxines and the serums.

It may seem like a return to the old pharmacology, when we read the composition of some of the lymphures of to-day; extracts of hogs' testicles, of the ovaries of sheep, and the spinal cord of the rabbit, and so on, would carry one back to the days when dried toads, and spiders, snakes' skins, and remedies of such like were in vogue.

It is to be hoped that the antitoxin treatment, which has proved so successful in diphtheria and hydrophobia, may be developed, until we have an anti-toxine for every disease. The typhoid anti-toxine has been fairly successful as a preventative of the disease in South Africa, and the anti-pneumo-coccic serum has had some results.

A writer in a Western journal has given us in verse the possible results of this method of treatment:

- " First they pumped him full of v.rus, from a mediocre cow,
- " Lest the small pox might invade him, and leave pit-marks on his brow;
- " Then one day a bull dog bit him, he was gunning down in Quogue,
- " So they filled his veins in Paris with the extract of mad dog.
- " But he caught tuberculosis, so they took him to Berlin, And injected half a gallon of bacilli into him.
- " And after he recovered, as of course he had to do,
- " There came along a rattlesnake, and bit his thumb in two;
- " And again his veins were opened, to receive about a gill
- " Of some serpentine solution with the venom in it still;
- " His friends were all delighted at the quickness of his cure;
- " When he caught the typhoid fever, and speedy death was sure.
- " But the doctors with some sewerage did inoculate a hen,

" And injected half its gastric juice into his abdomen,  
" To prepare him for a voyage on an Asiatic sea,  
" Some blood was pumped into him from a leprous old Chinese,  
" But his appetite had vanished, and he could not eat at all,  
" So the virus of dyspepsia was injected in the fall.  
" Now his blood was so diluted, by the remedies he'd taken,  
" That at last he laid him down and died and never did  
    awaken.  
" With the Brown-Sequard elixir though they tried  
    resuscitation,  
" He never showed a symptom of returning animation.  
" But the doctor still could save him, he persistently maintains,  
" If he only could inject a little life into his veins."

It is a matter of some question how much of such dilution the human body can stand, without bad results? So I think we must look into the future, as Dr. O. W. Holmes did some years ago, saying: "Let us not despair of the future, but let us be moderate in our expectations. When an oil is discovered which will make a bad watch keep good time; when a recipe is given which will turn an acephalous fetus into a promising child; when a man can enter a second time into his mother's womb, and give her back the infirmities, which twenty generations have stirred into her blood, and infused into his own through her, we may be prepared to enlarge our National Pharmacopeia with a list of specifics for everything except old age, and perhaps that."

Until then, let us accept with thankful hearts the advances and improvements which have come to us from the Nineteenth Century, and live in the hope that the Twentieth Century will surpass it, although we may never see it.

# DISSERTATION.

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ECTOPIC PREGNANCY.





## ECTOPIC PREGNANCY.

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W. K. TINGLEY, M.D.,

NORWICH.

The title of this paper, Tubal or Abdominal Pregnancy at term or under, gives me considerable latitude in discussing the subject. While I have a case ready illustrating term pregnancy, I have also several more cases illustrating the conditions preceding the complete development of the fetus. In looking up the list of operations done before and after life was extinct in the fetus I am surprised at the number reported. I am going to try and make this paper one of practical use and not simply an enumeration of cases and symptoms. Tubal and abdominal pregnancies are very much more frequent than is imagined by the general practitioner. Many a man will truthfully (as far as he knows) state that in his practice extending over so many years he has never met with a case of Ectopic Gestation. I consider it the bete noir of the general practitioner. The symptoms put down in the text-book are simple; they read easy, the tumor found at the right or left of the uterus seems hardly difficult to locate. The picture changes, however, when your patient comes in for consultation stating that she has "missed her period" perhaps for a week, then having half the normal amount of blood. You examine and there is nothing to be felt at that time. Your patient goes on in this uncertain way, the next month passing perhaps with no show at all, or very slight. You examine again, find a fullness or bulging in right or left of the uterus, the uterus normal in size or possibly somewhat enlarged. There may be the other symptoms of pregnancy; in fact they generally do exist but not always with the same in-

tensity of a normal pregnancy. The diagnosis is made, the treatment mapped out and perhaps before you can even begin to make your arrangements for operation, the rupture takes place, the patient goes into extreme shock, the physician, perhaps alone in a country district, has to wait, the woman comes out of the primary shock or dies, the pains become less. After a few days in bed the severity of the case seems to diminish, the doctor thinks he might be mistaken any way; the case goes on to another rupture or perhaps to term with a live child whose only reason for dying is that it cannot get out of the abdomen and there is no one about to help the unfortunate fetus into the world. In large cities where there are hospitals, where expert diagnosticians exist the picture is different. There the case is immediately referred to a gynecologist of note or sent to a hospital for immediate operation and while the number of successful operations is not as frequent as other laporatomies performed for pelvic diseases, still the records are much better than when left unrecognized and untreated. The great difficulty in the way of successful results is the treatment of the placenta. The removal of the placenta from the temporary uterms made by the walls of the tube or the folds of the broad ligament is attended by great hemorrhage as the blood-supply comes from both sides, except in true tubal pregnancy and it is impossible to control it by pressure except upon the abdominal aorta. For this reason the placenta is supplied freely with blood from all sides, and with each disturbance of an attachment no matter how trivial, the flow of blood is augmented and at times becomes overwhelming in the amount lost. The first case I am going to speak of illustrates the variety of ectopic pregnancy, tubal in character, that had gone on to full term, associated with death of the fetus and the removal of the fetus and placenta with the surrounding membrane nineteen months later. Pardon me if I go rather fully into the history of the case as I consider the several points

brought out of great interest and instructive from a diagnostic standpoint.

Mrs. B., married, aged forty-three, mother of one child, with a doubtful history of a miscarriage at the fourth month. Some twenty years ago she became, as she thought, pregnant early in 1897 after a period of sterility of over sixteen years. As she was approaching the time of her menopause she was at first inclined to think that her irregularity was caused by the nearness of that great event. As time went on she grew lazier and feeling life was forced to think herself pregnant. About eleven o'clock in the evening, at a time she considered full term she was taken with sudden nausea, a chill and extreme weakness. I found her in this condition when called: Sighing respiration; pulse weak, hardly perceptible at wrist, and all the signs of collapse. Making no examination I gave her some stimulants and a few directions and seeing that she responded left the house. The next day I called, finding her much better and sitting up in a chair. Asking her when she expected to be delivered of the child was told that next week was the time. Not wishing to disturb her I left the house without making an examination, but told her to send for me when the pains came on. After three months I called, thinking the baby delivered. Finding the woman the same I made an examination and found an empty uterus. The abdomen was rounded and bulging to the right. It looked and felt exactly like an ovarian tumor or cyst. I told the woman that no baby was coming and that she had a tumor. She consented to an examination by the members of the Surgical and Medical Staff of the W. W. Backus Hospital, who all agreed that in all human probability she had an ovarian cyst and advised operation. This the woman refused. I did not see any more of the patient for somewhat over a year when she called and desired me to remove the tumor as it interfered with her work as a laundress. Another consultation was held

and the abdomen carefully gone over. The mass to the right had lost all fluctuations and had shrunken one-third in size. It was now thought to be a fibro-cystic tumor of the right ovary or originating in the broad ligament. The operation was decided upon and two days later, at a time nineteen months after the expected advent of the child, the tumor was removed by abdominal incision. Right here let me state that the idea we all had that the trouble was ovarian probably saved the woman's life, because with that idea to the front I did not incise the tumor but removed it as a whole, sac, fetus, placenta, at once, breaking up the adhesion and working away little by little until the pedicle was reached. This was found to be the broad ligament and the tube of the right side. I finally succeeded in tying off the mass and made the right horn of the uterus serve for the improvised pedicle. I tied this off and then stitched in the raw surfaces, tying all bleeding points. Had I been expecting to find an abdominal or tubal pregnancy I would have opened the sac, taken the fetus out and then possibly encountered the extreme bleeding that comes with the removal of the placenta, probably have left it in and lost the woman with sepsis. After the wounded right horn of the uterus had been carefully attended to, the bleeding points from the numerous adhesions were heated by hot, firm pressure by gauze and the abdomen washed with several quarts of normal saline solution at temperature of 105° F. The operation had taken about two hours to perform owing to the numerous firm adhesions to the peritoneum and to the intestines and the patient was in rather a low condition. The flushing out of the abdomen with the hot salt water revived her and by the time I had finished sewing up the long abdominal incision, reaching from the pubes to above the umbilicus, she was in fair condition. The patient made an uneventful recovery and was in her home in three weeks. She has been in good health since but has not become impregnated again, normally or oth-





erwise. The sac was opened and a full term male child found weighing five and one-half pounds. Allow me to state here that several of the gentlemen present, including myself, had rendered the fact during the operation that it might be a fetus. The contents of the sac were perfectly sweet, all the fluid had disappeared and the child, aside from some maceration on the extremities, was in good condition. The photograph shows the general aspect of things.

Case II.—Mrs. B. A., aged twenty-seven, never pregnant. Seen in consultation with Drs. Witter and Harris, of this city. Patient stated that she had gone over two periods, except for a slight show at the second month. Had all the symptoms of pregnancy but was normal until two days before we saw her, when she was taken with colicky pain in the left side and fell in a faint. After a time she recovered under the care of Dr. Witter, who found her in complete collapse. After a consultation we decided on a ruptured tubal pregnancy and deemed it wise to operate. The patient was removed to the W. W. Backus Hospital where she was gotten ready for operation. While at the Hospital patient became so comfortable that she refused to have anything done and returned to her home. Three weeks later Mrs. A. had another sudden attack of pain, another complete collapse and remained unconscious for a long time. It was again decided to perform an immediate operation and the patient was again removed to the Hospital. Dr. George R. Harris performed the operation, I acting as his assistant. The abdomen was found full of partially decomposed blood, filling the right iliac region. No trace could be found of the fetus, placenta or sac. The whole mass was extremely friable and more than bled. The clots and masses of softened tissue were removed as rapidly as possible, the abdomen drained through the vagina and the patient removed from the table in very bad shape. She died a few hours after the operation, never coming out of the shock.

The third case I have in mind illustrates what some times happens when nature is left to do her work unassisted. Mrs. T., married, but never pregnant, failed to have her regular menstruation at the expected time. At the suggestion of a friend she partook freely of emmenagogue pills and quinine, with no result. The next monthly period came around and her heart was cheered by a faint show lasting five days. Just after the cessation of this flow she was taken with sudden pain in the left side and fainted away. I saw her soon after and found her in profound collapse with temperature  $96.5^{\circ}$ , pulse hardly countable. She revived, however, and next day I made an examination, finding, as I expected, a mass to the right of the uterus and a normal uterus. Told the patient what should be done, but was refused the operation. This woman gradually regained her normal condition and slowly the mass disappeared until now, two years from the occurrence of the rupture, there is only a slight thickening found. These three cases illustrate three totally different and distinct types of extra-uterine pregnancy. Two of them were proved to be so by operation and there is very little doubt that the third case was one of early rupture and death of the fetus with absorption of everything.

The points are very plain. Take the first case. Had I diagnosed correctly when first seen and had performed an operation I would have delivered a viable child, but probably have lost the mother, as I would not have tried to remove the mass as a whole, but would have removed the fetus and then tried to remove the placenta, either doing so with great loss of blood or failing to remove it, leaving it to decompose. The second case teaches us that to hesitate after a woman has given absolute signs of a ruptured tubal pregnancy is to subject her to a recurrence and much less chance for a successful result, as the danger of sepsis



and hemorrhage are increased ten fold. The third case goes to prove that sometimes Dame Nature steps to the front and takes the case out of our hands in a most satisfactory manner. I remarked early in this paper that the number of viable cases of ectopic pregnancy in the last hundred years had been surprisingly large. This goes to show that the number of unrecognized cases who died or who became well after rupture or after death of the fetus is correspondingly large. Dr. R. P. Harris, of Philadelphia, has prepared a table of ectopic viable fetuses delivered by operation between 1809 and 1896, published in Kelly's Operative Gynecology, showing the ratio of recoveries, twenty-seven in forty, the last twenty cases operated upon showing fifteen recoveries, this probably owing to the improved technique and antisepsis adopted in the last fifteen years. Dr. Harris has seventy-seven cases in his table. Dr. L. H. Dunning reports five cases of viable fetus operated on between six and nine months pregnancy. These are published in the American Journal of Obstetrics, Vol. 40. Dr. Dunning also makes out a table of seventeen cases where the date of pregnancy was from two and one-half months up to term where the fetus was dead at the time of the operation. Dr. Edward A. Ayer, of New York City, gives a table of one hundred and forty-eight cases between 1880 to 1898, only including cases operated on by abdominal incision and excluding vaginal cases and cases of lithopædia occurring long after the death of the fetus and also excluding cases occurring before the sixth month. Dr. Le Roy W. Hubbard has kindly assisted me in getting the tables referred to and he has sent me eighteen cases, varying from three weeks to two years, not included in the tables of Ayers, Dunning, or Harris; with my case of two years standing added, making a total of nineteen cases not included in the above mentioned tables.

The summary of cases reported in 1894, 1895, 1896,

taken from the tables of Harris, Ayers, and Dunning shows as follows:

FETUS ALIVE AT TIME OF OPERATION.

	No. Cases.	Mother Recovered.
Harris, . . . . .	13	10
Ayer, . . . . .	7	1
Dunnings, . . . . .	5	1
	—	—
Total, . . . . .	25	15 60 per cent. recovery.

FETUS DEAD AT TIME OF OPERATION.

Ayers . . . . .	16	6
Dunnings, . . . . .	17	13
	—	—
Total, . . . . .	33	19 57.7 per cent. recovery.

These tables I have in full with the name of the operator, the date of the operations and the time of fetation, with the result to mother and child. I will not take the time to read them, but will have them printed with this paper. In looking over the results one is struck with the frequency of death caused by the placenta that had to be left on account of the alarming hemorrhage caused by the attempt to remove it.

According to the statistics of Dr. Ayer the placenta has been the main cause of a mortality of 38.5 per cent. in one hundred and forty-eight cases occurring since 1880. The point that occurs to me with great force is why is it not best to try and remove the whole mass, sac, fetus, placenta, and tie it off from the attachments, instead of opening the sac, removing the child and then either removing the placenta with great loss of blood or leaving it for septic changes to almost certainly take place? I find that Martin, of Munich, removes sac and placenta, leaving enough of the sac to cover the cut surfaces and then stitching this to close the cavity from the peritoneal cavity, sometimes draining into the vagina. Sometimes

he would perform a complete hysterectomy. The great trouble in these extra-uterine cases is the fact that the placenta occupies almost as many positions in the abdomen as there are cases reported. Sometimes it is extra-peritoneal, again intra-peritoneal and in the greater number of cases placenta was spread out, with its blood supply coming from such extensive surfaces that it is impossible to ligate. One is then compelled, if attempting to remove it, to depend upon aortic compression and by direct pressure by very hot gauze. In the extra-peritoneal variety it is comparatively good surgery to stitch the sac to the abdominal walls and wait until the placenta sloughs off and is then removed. In cases of intra-peritoneal attachment the wound has been closed leaving the placenta with some recoveries, but more generally death from sepsis or hemorrhage. It is practical to tie the vessels, as a great majority of the cases are primarily tubal, consequently their supply is unilateral. The aorta can be compressed while the vessels are being tied when the bleeding is extreme, as in cases where the fetus lies under the placenta or in Douglas' cul-de-sac. Sometimes in extra-peritoneal cases the placenta is in line of the abdominal incisions. Here the hemorrhage is extreme. It is about as well to rapidly try to separate the parts as to try to stop the bleeding by packing and compression. A good rule is the one Martin puts forth strongly, that is to ligate the vessels supplying the placenta before attempting to remove it. He reports a remarkable diminution in the amount of blood lost by using this method. To enumerate the different ways the placenta has been treated during these hundred years is too much of an undertaking for the time limit of this paper. Sufficient to say that practically three ways have been adopted: to remove it absolutely, to leave it in the sac in extra-peritoneal cases and then allow it to slough and to leave it in the abdomen in intra-peritoneal cases and wait for nature to atrophy the mass which sometimes

happens or to decompose and render septic the patient, which more frequently happens. Dr. Ayers has made some interesting experiments in trying to render the placenta less liable to decomposition by injecting solutions of formaldehyde and other antiseptic fluids. He says he is encouraged enough to keep working in those lines. When we come to the management of the fetus the subject is easily disposed of. The golden rule of Obstetrics to consider always the mother applies in extra-uterine fetation even more emphatically. Kelly in his text-book of Gynecology reports seventy-seven cases of children born alive by removal from the abdominal cavity by laparotomy. Only seven lived according to the tables and in Ayer's tables of one hundred and one cases twenty lived, but the majority of these have since died. The great question to decide after the discovery of an extra-uterine case is when to operate. Perhaps while we are trying to decide we might employ the old time aids to the destruction of the fetus. Cases have undoubtedly been cured by the early employment of electricity and this can be done without danger. Certainly if it does no good it can do no harm. Statistics show that the older the gestation the greater the mortality. The sooner the operation is done after making a diagnosis the better are the chances for the mother; especially if the operation can be done before the possible rupture takes place, causing weakness in the patient and rendering the case more liable to sepsis from the presence of clots that are undergoing changes. The abdominal method has been the most popular manner of performing the operation. The vaginal is confined to a few peculiar cases where the location of the fetus makes it more feasible to reach it than by the median incision. Herman in his paper (Trans. Obst. Society, London,) concludes "that the vaginal method may be preferred when the fetus is in the cul-de-sac next the vagina and can be delivered head first

and without turning, when the placenta may be attached to the anterior abdominal wall and when the contents of the gestation sac are suppurating with the fetus next the vaginal wall. Ayers would only select the vaginal method when the fetus has already partially perforated the vaginal wall or when the fetus or sac is suppurating, or when it is suré that the sac lies without the peritoneum and we can remove the fetus without undesirable tearing of the maternal tissues, leaving the placenta under drainage to separate and come away through the vaginal opening. However, we can never feel sure that the sac is extra-peritoneal. Herman showed the mortality was greater the longer the period of gestation when the fetus was alive and the best results of all conditions were when the sac was suppurating. In cases where the fetus has been dead for a long time, that is to say a year, we can be guided by no absolute rule. It is a temptation to leave the patient alone as long as she is well, but sudden sepsis may occur and result fatally while we are watching for the right time to operate. Dr. Andrew Currier, of New York, reports at length in the *Annals of Gynecology and Pediatrics of Boston*, August number, Vol. XI, a case of removal by abdominal incision of the remains of an extra-uterine fetus of fourteen years' standing. This case went on in perfect health until she became suddenly septic. The case died of anemia ten days after the operation. The first operation for ectopic pregnancy performed in this country was done by Dr. John Bard, of New York, in 1759. The first successful laparotomy was performed by Dr. Baynham on the wife of a Virginia planter. The same gentleman also operated successfully on a negro slave in 1799. A brief summary will fittingly close this paper:

1. Operate as soon as possible after the diagnosis is made, especially before there has been rupture and hemorrhage.

2. Operate by the median incision, beginning the incision near the pubes as possible; the sac may be extra-peritoneal.

3. If possible, tie off the entire contents of sac; if not, remove the fetus first, tie all the vessels possible before trying to remove the placenta.

4. For the hemorrhage compress the aorta while the vessels are being tied and use compresses on bleeding surfaces.

5. If impossible to remove placenta stitch the sac to the abdominal walls and remove it later.

6. If the placenta must be left behind in the abdomen try Ayer's method of injection with formaldehyde, trim off the sac, cut the cord and close the wound.

7. Operate at once if the fetus has been dead a month or more, not waiting for signs of sepsis, always removing a decomposing, friable placenta.

8. Perhaps use electricity if the diagnosis is made early before resorting to immediate operation.

TABLE OF EXTRA-UTERINE ABDOMINAL PREGNANCIES FROM 1880--1898. SIXTH TO SIXTEENTH MONTHS.

Tables of John C. Ayer of New York, from 1880 to 1898, rep. 148 cases with 104 recoveries and 42 deaths. Mortality 46.4%.

Operator.	Year.	Time of Pregnancy.	Results—Fetus.	Placenta— R (rem'd) L (left)	Drainage.	Results Mother.	Remarks.
Netzel.....	1880	9 mos.....	Died 48 hours...	.....	.....	D'd 48 hs	Placenta divided in first incision. Hem. severe.....
Wilson—H.P.C	1880	"	D in 18 min.....	.....	.....	D 90 hrs..	.....
Litzmann.....	1880	3 w. aft. fet. d	D in 15 min.....	R in 12 ds	.....	D 16 dys.	Sepsis developed.....
Brathwaite.....	.....	4 w. aft. fet. d	Dead.....	L.....	.....	Recov'ed	Placenta weighed 28 1-2 oz; fetus 3 lb. 8 oz.....
"	.....	14 d. aft. spur.l.	"	L.....	.....	"	Placenta never came away.....
Belsone.....	1881	9 mos.....	Lived.....	L.....	.....	D 6 dys..	Placenta came away in six weeks.....
Martin A.....	1881	7 mos.....	Died at birth...	.....	.....	Recov'ed	Septicemia.....
Hildebrandt.....	1882	9 mos.....	Lived.....	.....	.....	D 10 dys.	Fetus had occipiti-encephalocoele. Ligated ovarian and uterine arteries before removing placenta.....
"	1882	8 mos.....	Died.....	.....	.....	Died.....	Almost moribund at operation.....
Kusnetsky.....	.....	.....	"	R.....	.....	Recov'ed	In extremis.....
"	.....	.....	"	R.....	.....	"	.....
Sutugin.....	.....	.....	"	R.....	.....	"	.....
Kadian.....	.....	.....	"	R.....	.....	"	.....
Tait.....	.....	.....	Lived.....	.....	.....	"	.....
"	.....	.....	"	"	.....	"	.....
Price, J.....	.....	7 1-2 mos.	Died.....	.....	.....	Died.....	Died in fourteen days.....
Brouen Von-- Fernwald.....	.....	.....	Died in 24 hrs..	R.....	.....	Recov'ed	Hysterectomy. Ligated vessels before removing pla- centa.....
Bresky.....	.....	8 mos.....	Lived 3 wks.	R.....	.....	.....	Stitched sac to abdominal wound.....
Ross.....	.....	8 mos.....	Macerated.....	L.....	Yes.....	.....	Placenta removed in eight days. Sac stitched.....
Taft.....	.....	9 mos.....	"	L.....	"	.....	Placenta removed in nine days. Sac stitched.....
"	.....	"	Died.....	Partly R	.....	.....	.....
Fowler.....	.....	.....	Lived 3 wks	"	.....	.....	Ligated vessels before removing placenta.....
Eastman.....	.....	.....	Dead.....	"	.....	.....	.....
Slavjansky.....	1882	8 mos.....	"	"	.....	.....	.....
Quénn.....	1883	.....	"	"	.....	.....	.....
Wiedon.....	1884	.....	"	"	.....	.....	.....
Sereznikoff.....	.....	.....	Lived.....	.....	.....	.....	Fetus was in uterus bicornis.....

Operator.	Year	Time of Pregnancy.	Results—Fetus.	Placenta— R (rem'd) L (left)	Drainage.	Results Mother.	Remarks.
Cripps.....	.....	.....	Lived.....	L.....	None.....	".....	in three days. Thinks drainage might have saved.....
Shield.....	.....	6 mos.....	.....	R.....	.....	Died.....	.....
Lazarewicz.....	1885	7 mos.....	Died 21 days.....	Partly R.....	.....	Recov'ed.....	.....
Worrall.....	.....	9 mos.....	.....	L.....	.....	".....	.....
Herman.....	.....	15 mos.....	Died 2 mos.....	L.....	.....	.....	.....
Corbin.....	.....	.....	Putrid.....	R.....	.....	.....	Wound was closed.....
Haynes.....	.....	.....	3 weeks d.....	R.....	Vaginal.....	.....	.....
Rowan.....	.....	.....	Decomposed.....	R.....	.....	D 60 hrs..	.....
Champneys.....	.....	7 mos.....	Died soon.....	L.....	Yes.....	D 5 dys..	.....
Cervis.....	.....	9 mos.....	Died 6 hrs.....	L.....	".....	Recov'ed.....	Placenta decomposed and caused death.....
Tait.....	.....	.....	Living, adult.....	L.....	.....	D 80 dys..	Hemorrhage in fifty-six hours and peritonitis.....
Taylor.....	.....	.....	Died 11 mos.....	L.....	.....	D 56 dys..	.....
Jessop.....	.....	8 mos.....	".....	L.....	.....	D 4 dys..	Placenta came away in 12 days.....
Dunning.....	.....	9 mos.....	Dead.....	L.....	.....	Recov'ed.....	Decomposed placenta came away in 5-32 days.....
Ross.....	1886	.....	.....	L.....	Yes.....	".....	Sac was removed.....
Stadtfeldt.....	.....	9 mos.....	Lived.....	L.....	.....	Recov'ed.....	Internal hemorrhage?.....
Rosenwasser.....	.....	9 1-2 mos.....	Dead.....	R.....	.....	D 38 hrs..	Clamped ovarian artery.....
Williams.....	1887	8 1-2 mos.....	Died soon.....	L.....	Yes.....	Recov'ed.....	Placenta decomposed and gradually sloughed out.....
Morison.....	.....	.....	.....	.....	.....	".....	Great hemorrhage, controlled with sponge.....
.....	1888	.....	.....	.....	.....	".....	.....
Richardson.....	.....	10 mos.....	2 mos. dead.....	Partly R.....	.....	".....	.....
Plummer.....	1888	".....	.....	R.....	Double.....	".....	Placenta in line of incision and cut through.....
Olshausen.....	1888	9 mos.....	Lived.....	R.....	Yes.....	".....	Lig'd arteries before removing placenta.....
McMurtry.....	1888	".....	Putrid.....	Partly R.....	Ab'd'm'l.....	".....	in few hours from hemorrhage.....
Egon Braun.....	1888	8 1-2 mos.....	.....	.....	.....	Died.....	.....
Lebee.....	1888	8 mos.....	Lived 24 hrs.....	.....	.....	".....	.....
Carl Braun.....	1889	9 mos.....	" 12 hrs.....	.....	.....	".....	.....
Olshausen.....	1889	8 1-2 mos.....	" 1 1-2 hrs.....	.....	.....	Recov'ed.....	.....
Nearl.....	1889	8 mos.....	" 18 hrs.....	.....	.....	".....	.....
Fearce.....	1889	12 mos.....	Macerated.....	.....	.....	Died.....	.....
Pinard.....	1889	9 mos.....	Dead.....	L.....	Yes.....	Recov'ed.....	.....
.....	.....	".....	.....	L.....	".....	".....	.....
.....	1889	".....	Macerated.....	L.....	".....	".....	.....



Operator.	Year.	Time of Pregnancy.	Results—Fetus.	Placenta— R (rem'd) L (left)	Drainage.	Results Mother.	Remarks.
McLean, M....	1889	12 mos.....	Dead.....	R.....	.....	.....	.....
Briggs.....	1890	.....	Died 1 wk.....	R.....	.....	Died.....	.....
Rein, Geo.....	1890	9 1-4 mos.....	Lived.....	R.....	.....	Recovered	in 10 hrs.—Hem. great; pla. extensy attached.
Negri.....	1890	8 mos.....	" 2 days.....	.....	.....	Died.....	.....
Schooner.....	1890	".....	Died soon.....	R.....	.....	Recovered	.....
Reh.....	1890	.....	Living 2 yrs.....	R.....	.....	"	.....
Olliver, J.....	1891	9 mos.....	Died.....	L.....	Yes.....	Died.....	.....
Guenlot.....	1891	7 mos.....	" 3 wks.....	.....	.....	Recovered	.....
Schneider.....	1891	".....	" 4 mos.....	.....	.....	"	.....
Frommel.....	1891	9 mos.....	" 48 hrs.....	.....	.....	"	.....
Stevenson.....	1891	8 1-2 mos.....	Died.....	.....	.....	"	.....
Von Strauch.....	1891	9 mos.....	Living.....	L.....	.....	"	.....
Schauta.....	1891	".....	.....	.....	Yes.....	"	.....
Olliver, J.....	1892	.....	.....	.....	.....	.....	.....
Sippel.....	1892	7 mos.....	Lived 5 days.....	.....	.....	Died.....	.....
Marchand.....	1892	9 mos.....	Lived 8 mos.....	.....	.....	Died.....	.....
Sneguireff.....	1892	".....	" 18 mos.....	.....	.....	Recovered	.....
Urbain.....	1893	.....	Lived.....	.....	.....	Died.....	.....
McNutt.....	1893	.....	Died.....	.....	.....	Recovered	.....
Regnier.....	1893	.....	".....	.....	.....	.....	.....
Roncaglia.....	1893	7 1-2 mos.....	Lived 23 days.....	.....	.....	.....	.....
Cushing.....	1893	9 mos.....	.....	R.....	Vaginal.....	"	Great hemorrhage in removing placenta; used gauze.
Guenolt.....	1893	".....	Lived 16 days.....	.....	.....	Died.....	.....
Lusk.....	1893	6 mos.....	Died soon.....	R.....	Gauze.....	Recovered	Ligated ovarian artery.
Werder.....	1893	9 mos.....	.....	L.....	.....	"	Sac stitched; clamped ovar. arty. and stopped hem.
Traub.....	1893	8 1-2 mos.....	Died.....	R.....	.....	Died.....	Died on table.
Halberstadt.....	1894	10 mos.....	Dead.....	R.....	.....	"	Died in 17 days.....
Eakins.....	1894	.....	Living 8 1-2 mos.....	L.....	Yes.....	.....	.....
Smyly.....	1894	.....	.....	R.....	.....	.....	.....
Werder.....	1894	8 1-2 mos.....	Lived 4 days.....	.....	.....	Recovered	.....
Potherat.....	1894	.....	.....	.....	.....	"	.....
Tournay.....	1894	9 mos.....	Lived 2 hrs.....	.....	.....	"	.....
Dickinson, E.	1894	12 mos.....	Dead.....	.....	.....	Died.....	P. M. showed blood supply from uter. and 3 small arts.

Operator.	Year.	Time of Pregnancy.	Results—Fetus.	Placenta— R (rem'd) L (left)	Drainage.	Results Mother.	Remarks.
Pestalozza.....	1895	9 mos.....	Lived.....			Recovered	
Tauffer.....	1895	"	"			"	
Bond.....	1895	7 1-2 mos.....	"			"	
Pinar.....	1895	7 mos.....	"			"	
Cullingworth.....	1895	8 mos.....	Died.....	L.....	None.....	Died.....	Abdomen re-opened 26 days; sepsis, death.....
Hardie, D.....	1895	"	" 6 hrs.....	L.....	Gauze.....	Recovered	Sac stitched; placenta came out 6 to 7 weeks.....
Hanfield Jone.....	1895	"	Alive 3 mos.....	L.....	"	Died.....	Placenta removal would have been fatal.....
Robinson, B.....	1895	10 mos.....	"	Partly R	Yes.....	"	In six days, slight hemorrhage.....
Cullingworth.....	1895	9 mos.....	Macerated.....	R.....	"	"	"
"	1895	"	"	R.....	"	"	"
Lithotsky.....	1895	"	Lived.....	R.....	"	Recovered	"
Eagleson.....	1896	9 mos.....	Died.....	R.....	Abd m'l.....	"	Oper. during eclampsia.....
Kolloch, C.....	1896	13 mos.....	Macerated.....	R.....	"	Died.....	(in 1 mo. Fetus weighed 10 lbs. Fibroid removed; pla
Chrobak.....	1896	7 mos.....	Lived.....	"	"	Recovered	fibrous, then degen.; very vas.)
Kaan.....	1896	9 mos.....	Dead.....	"	"	Died.....	"
Folet.....	1896	"	"	R.....	"	Recovered	"
Frost.....	1896	"	Died 24 hrs.....	R.....	"	Died.....	Pla. in li. incis., cut thro. also attached to sigmoid.....
Martin, A.....	1896	"	Dead.....	L.....	"	Recovered	"
Reismaan.....	1896	"	"	"	"	"	"
Yakooleff.....	1896	9 mos.....	Living.....	R.....	"	"	"
Olliver.....	1896	"	"	R.....	"	"	"
Wetherell.....	1896	12 mos.....	Dead.....	R.....	Yes.....	"	Placenta easily removed.....
Briggs.....	1896	"	Dead 1 wk.....	R.....	"	Died.....	in 1 hour.....
Wilson.....	1896	7 1-2 mos.....	Dead.....	R.....	"	Died.....	"
Rochard.....	1896	"	Macerated.....	R.....	None.....	"	"
Ayers.....	1896	7 mos.....	Lived 3 wks.....	R.....	"	Died.....	Lived 20 hrs. Pla. lig'd off; hom. mod.....
"	1897	10 mos.....	Macerated.....	R.....	Vaginal.....	Recovered	Lig'd 1 b. lig't. Placenta mostly avascular.....
Dunning.....	1897	9 1-2 mos.....	"	R.....	"	"	Sac in part 1 1-2 cm. thick; pla. r'mo'd in 10 days.....
Royster.....	1897	12 mos.....	Dead.....	R.....	"	"	Deliv. 4 wks. before of living 9 mos. fet. intrauterine.
Fairchild.....	1897	7 mos.....	"	R.....	"	Died.....	Moribund from supg. old pyo-salpinx.....
Price, M.....	1897	9 mos.....	"	R.....	"	Recovered	"
Earnest.....	1897	"	Lived.....	R.....	"	"	"
Charles, N.....	1897	8 mos.....	"	L.....	"	"	Placenta came away 6 weeks.....

Operator.	Year.	Time of Pregnancy.	Results—Fetus.	Placenta— R (rem'd) L (left)	Drainage.	Results Mother.	Remarks.
Sacchi.....	1897	.....	"	R.....	.....	"	.....
Eberlein.....	1897	.....	Died.....	R.....	.....	"	.....
Crouzat.....	1897	.....	"	L.....	.....	Died.....	.....
Olliver, J.....	1897	9 mos.	.....	L.....	Yes.....	Recovered	From placental infection.....
Rochet.....	1897	12 mos.	Macerated.....	R.....	.....	"	.....
Bastian.....	1898	9 mos.	Dead.....	L.....	Yes.....	"	Sac stitched to abdominal wound.....
Warszawski.....	1898	16 mos.	Dead 6 mos.	.....	.....	"	.....
Bielby.....	1898	9 mos.	Dead.....	.....	Yes.....	"	.....
Neugebaum.....	1898	.....	Living.....	.....	.....	"	.....
Janezewski.....	1898	.....	"	.....	.....	"	.....
Herman.....	1898	.....	Dead.....	R.....	.....	"	.....
Thomas & Ward.....	1898	.....	Macerated.....	Partly.....	Yes.....	"	Fetus been dead 6 months.....
Frolich.....	1898	.....	Putrid.....	.....	.....	"	.....
Swift.....	1898	11 mos.	.....	R.....	.....	"	.....
Johnson.....	1898	12 mos.	Dead.....	R.....	.....	"	.....
Earnest, J.....	1898	7 mos.	"	R.....	Abd'm'l.	"	Hysterectomy; great hemorrhage.....
Dalton.....	1898	.....	Died.....	R.....	"	"	Hemorrhage severe.....
Martin, N. Z.....	1898	.....	Putrid.....	R.....	"	"	.....
Cragin.....	1898	6 mos.	Macerated.....	R.....	Gauze.....	Died.....	.....
"	1898	9 1-2 mos.	10 days dead.	R.....	"	Recovered	.....
Doleris.....	1898	.....	Living.....	R.....	.....	"	.....
Sereznikoff.....	1898	.....	"	.....	.....	"	.....

TABLE OF ECTOPIC VIABLE FETUSES DELIVERED BY OPERATION 1890--1896.  
 Prepared by R. P. Harris, M.D., Philadelphia. Taken from Kelly's Operation Gynecology.

	Date.	Operator.	Locality.	Result to Woman.	Result to Child.	Period of Gestation.	Time Survival of Child.
1	Nov. 1809.....	Müller.....	Halbean.....	Recovered....	Lived	9 mos.....	(?).....
2	Aug. 1813.....	Brükert.....	Berlin.....	Died.....	"	"	Well at 4 yrs.....
3	Dec. 1814.....	Novara.....	Porto Ma'zio..	"	"	"	(?).....
4	Dec. 1827.....	Mattfeld.....	Tübingen.....	"	"	"	(?).....
5	March 1841.....	Hauß.....	Kirchheim.....	"	Alive	35 weeks..	59 hours.....
6	March 1852.....	Lazzati.....	Milan.....	"	"	9 mos.....	Did not breathe..
7	March 1863.....	Kveberli.....	Strassberg.....	"	"	"	24 hours.....
8	April 1864.....	Greenhalgh.....	London.....	"	"	"	1 hour.....
9	March 1870.....	Sale.....	Ab'deen, Miss	"	Lived	"	6 months.....
10	Oct. 1872.....	Scott.....	London.....	"	Alive	30 weeks... To second day....	"
11	Aug. 1875.....	Jessop.....	Leeds.....	Recovered....	Lived	33 or 34 w	11 months.....
12	March 1877.....	Spiegelberg.....	Breslau.....	Died.....	"	40 weeks..	3 months.....
13	May 1877.....	Smith.....	London.....	"	Alive	9 mos.....	30-40 minutes....
14	Nov. 1877.....	Gervis.....	Breslau.....	"	"	36 1-2 wks	6 hours.....
15	Aug. 1878.....	Fraenkel.....	Berlin.....	"	"	33 1-2 wks	24 hours.....
16	May. 1879.....	Schroeder.....	Christiania...	"	"	34 weeks..	Well at 6 months..
17	Dec. 1879.....	Veleder.....	Kiel.....	"	"	35 weeks..	Second day.....
18	Jan. 1880.....	Litzmann.....	Birmingham	"	Lived	39 1-2 wks	15 minutes.....
19	Feb. 1880.....	Tait.....	Birmingham	"	"	9 mos.....	Living at 15 yrs..
20	May 1880.....	Wilson.....	Battumess.....	"	"	"	18 months.....
21	July 1880.....	Netzel.....	Stockholm.....	Died.....	Alive	9 mos.....	48 hours.....
22	July 1881.....	Martin.....	Berlin.....	Recovered....	"	7 mos.....	Did not breathe..
23	July 1881.....	Feisone.....	Bun'co, India..	Died.....	Lived	9 mos.....	Living in 1895....
24	Feb. 1882.....	Hildebrandt..	Königsberg...	"	"	"	"
25	Oct. 1882.....	"	"	"	Alive	34 1-2 wks	Did not breathe...
26	June 1885.....	Williams.....	London.....	Recovered....	"	35th wk....	A few minutes....
27	Nov. 1885.....	Lazarwitch.....	Kharkof, Rus	"	Lived	9 mos.....	26 days.....
28	June 1886.....	Stadfeldt.....	Copenhagen...	Died.....	"	"	7 months.....
29	Oct. 1886.....	Champanys...	London.....	"	Alive	7 mos.....	A few minutes....
30	March 1887 ..	Jos. Price.....	Camden, N.J.	"	"	7 1-2 mos	4 hours.....

	Date.	Operator.	Locality.	Result to Woman.	Result to Child	Period of Gestation.	of Child. Time Survival
31	May 1887.	Treub.	Leyden.	Recovered.	Lived	8 1-2 mos.	Well at 7 1-2 years.
32	June 1887.	F. Spaeth.	Hamburg.	Died.	Alive	8 mos.	24 hours.
33	Oct. 1887.	Bre sky.	Vienna.	Recovered.	Lived	"	19 days.
34	March 1888.	Leb-s.	Paris.	Died.	Alive	"	24 hours.
35	July 1888.	Eastman.	Indianapolis.	Recovered.	Lived	"	8 months 13 days.
36	Oct. 1888.	Egon Braun	Vienna.	Died.	"	8 1-2 mos.	"
37	Nov. 1888.	Olshausen.	Berlin.	Recovered.	Alive	"	Well at one year.
38	Feb. 1889.	C. Braun.	Vienna.	Recovered.	"	9 mos.	12 hours.
39	Feb. 1889.	Olshausen.	Berlin.	"	"	8 2-5 mos.	11-2 hours.
40	Sept. 1889.	Negri.	Venice.	"	"	8 mos.	18 hours.
41	Oct. 1889.	Pearce.	London.	Died.	Lived	12 mos.	Signs of life.
42	Feb. 1890.	Geoklin.	Kieff.	Recovered.	"	37 weeks.	Living in 1894.
43	April 1890.	Galabin.	London.	Died.	"	7-8 mos.	6 weeks.
44	June 1890.	Chrobak.	Vienna.	Recovered.	Alive	7 1-2 mos.	24 hours.
45	June 1890.	Taylor.	Birmingham.	"	Lived	9 mos.	5 months.
46	Aug. 1890.	Negri.	Venice.	Died.	Alive	8 mos.	2 days.
47	Aug. 1890.	Schooneu.	Antwerp.	Recovered.	"	"	A few minutes.
48	Feb. 1891.	Schneider.	Berlin.	"	"	7 mos.	3 hours.
49	Feb. 1891.	Grünlot.	Paris.	Died.	"	7 1-2 mos	1-4 hour.
50	June 1891.	Frommel.	Erlangen.	Recovered.	Lived	9 mos.	4 months.
51	Nov. 1891.	Stevenson.	Cape Colony.	"	Alive	8 1-2 mos.	48 hours.
52	Nov. 1891.	Von Stanch.	Moscow.	"	Lived	9 mos.	Breathed and died.
53	April 1892.	Handf'd-Jones	London.	Died.	"	25th day.	Alive at 3 mos.
54	April 1892.	Sippel.	Frankfort.	"	"	7 mos.	5 days.
55	Oct. 1892.	M. Price.	Phila.	Recovered.	"	10 mos.	Well in 1897.
56	Dec. 1892.	Marchand.	Paris.	Died.	"	36 weeks.	8 months.
57	April 1893.	Sneguireff.	Moscow.	Died.	Lived	8 mos.	18 months.
58	May 1891.	Urbain.	LaEouveln.	Recovered.	Alive	9 mos.	"
59	Aug. 1893.	McKutt.	Oakland, Cal.	Died.	"	"	A few minutes.
60	Aug. 1893.	E. Regnier.	Vienna.	Recovered.	Lived	7 1-2 mos.	Did not breathe.
61	Sept. 1893.	Roucaglia.	Modena.	"	Alive	8 1-4 mos.	23 days.
62	Oct. 1893.	Treb.	Leyden.	"	Lived	9 mos.	50 hours.
63	Dec. 1893.	Hofmeim.	Wurzburg.	"	"	"	Did not breathe.

	Date.	Operator.	Locality.	Result to Woman.	Result to Child.	Period of Gestation.	Time Survival of Child.
64	Dec. 1893.....	Guineat.....	Paris.....	Died.....	Lived	9 mos.....	16 days.....
65	Jan. 1894.....	Aillingworth.....	London.....	".....	"	8 mos.....	7 1-2 months.....
66	April 1894.....	Werder.....	Pittsburg.....	Recovered.....	"	8 1-2 mos.....	4 days.....
67	Sept. 1894.....	Potherat.....	Paris.....	".....	"	(?).....	(?).....
68	Sept. 1894.....	Tournay.....	Brussels.....	".....	Alive	9 mos.....	2 hours.....
69	Nov. 1894.....	Eakins.....	Queensland.....	Died.....	Lived	8 1-2 mos.....	Alive at one month
70	Dec. 1894.....	G. Rein.....	Kief.....	Recovered.....	"	3 weeks.....	Alive '95.....
71	Feb. 1895.....	Pestalozza.....	Florence.....	".....	"	9 mos.....	Alive in March, '95.
72	May 1895.....	Pinard.....	Paris.....	".....	"	7 mos.....	Alive in July, '95...
73	Sept. 1895.....	Taufert.....	Budapest.....	".....	"	9 mos.....	Alive 58 days.....
74	(?).....	Bond.....	Leicester.....	".....	"	7 1-2 mos.....	Living at 5 mos.....
75	Feb. 1896.....	Hardie.....	Brisbane.....	".....	"	8 mos.....	6 hours.....
76	Feb. 1896.....	Chrobak.....	Vienna.....	".....	"	9 mos.....	Living at 4 wks.....
77	Feb. 1896.....	Ayers.....	New York.....	Died.....	"	7 mos.....	Living at 3 wks.....

Recoveries 27 in 40; last 20 cases, 15 recoveries. Of 5 deaths, Case No. 59 was delirious when operated on; No. 64 died of peritonitis; No. 65 had placenta closed in and died on the 26th day; No. 69 removed dressings because fly-blown and died on the 16th day; No. 77 was quickly operated, lost little blood but died next day.

FETUS VIABLE OPERATION BETWEEN 6 AND 9 MONTHS PREGNANCY.  
 Tables of L. H. Dunning and taken from paper published in Am. Jour. Obstet., Vol. 40.

Operator.	Date of Pregnancy.	Treatment of Placenta.	Mother.	Reference.
Cripps.....	6 mos.....	Left.....	Died.....	Brit. Med. Journal 1896, p. 779.....
Dunning.....	Term.....	".....	".....	Unpublished.....
W.R. Wilson.....	Term.....	".....	".....	Am. Jour. Gyn. & Obst., viii, p. 605.....
A.J. McCostl..	6 1-2 mos.....	Removed....	Recovery.....	Med. & Surg. Report Presby. Hosp., 1896.
W.F. McNutt..	Term.....	".....	Died.....	Jour. Am. Med. Assn., Vol. xliii, p. 278.
	Fetus Dead.			Not Reported in Ayer's Table.
S. W. Budd.....	4 mos.....	Removed....	Died.....	Va. Med. Monthly, xx, p. 957.....
S. W. Budd.....	14 days.....	".....	Recovery.....	Ibid.....
J. Phillips.....	2 1-2 mos.....	".....	".....	Trans. Lond. Obstet. Soc.....
J. M. Rector.....	3 mos.....	".....	Died.....	N. Y. Med. Jour., ix, p. 648.....
H. Meek.....	(?).....	".....	Recovery.....	Am. Jour. Obst., Vol. xxix, p. 84.....
J. W. Elliott.....	(?).....	(?).....	".....	Boston Med. & Surg. Jour. cxxx, p. 260.
Vignard.....	(?).....	Removed....	".....	Am. Jour. Obst., Sept., 1894.....
Mackenzie.....	(?).....	".....	".....	Brit. Gyn. Jour. 1894-95.....
McClintock.....	8 mos.....	Absorbed....	".....	Kansas Med. Jour., vii, p 15.....
E. K. Ballard.....	6-7 mos.....	".....	Died....	Am. Jour. Obst., xxxiii.....
H. F. Biggar.....	(?).....	Removed....	Recovery.....	N. Am. Jour. Homeopathy, 1894.....
L. F. A. Moses.....	4 mos.....	Left.....	".....	Edin. Med. Jour., xv, p. 421.....
R. Ludlum.....	Some time.....	Removed....	".....	Clinique Chicago xv, p. 471.....
J. D. Griffith.....	18 mos.....	".....	".....	Trans. Med. Assn., Mo.....
F. Michinard.....	Not stated....	".....	Died.....	Am. Jour. Obst., July, 1896.....
C. G. Franklin.....	".....	".....	".....	Brit. Med. Jour., Vol. I, p. 1819.....
A. H. Barbour.....	".....	".....	".....	Edin. Med. Jour.....

## CASES FOUND BY LEROY W. HUBBARD.

Not reported in Harris', Ayer's or Dunning's tables.

Operator.	Fetus Dead.	Treatment of Placenta.	Mother.	Reference.
Thomas, T.G.	Some time..	Left.....	R. slow, some sep. infection Recovery.....	Am. Jour. Obst., Vol. ix., 1876.....
Thomas, T.G.	8 mos.....	.....	"	Am. Jour. Obst., Vol. xi., 1878 .....
J. Macdougall	18 mos.....	Nopla. found..	"	Edin. Med. Jour., July, 1876.....
M. Hofmeier.	2 mos.....	Removed.....	"	Leitschft & Gebhlfr on Gyn., vi.....
M. Hofmeier.	3 wks.....	"	Died.....	Leitschft & Gebhlfr on Gyn., vi.....
Wm. Goodell	About 1 yr....	Nopla. found..	"	Am. Jour. Obst., Vol. xiv.....
Billroth.....	2 1-2 yrs....	(?).....	Recovery.....	Arch. Gyn., xix, 1882.....
J. W. Rutledge	One month....	Left.....	"	Am. Jour. Obst., Vol. xviii., 1137. ....
Eraithwaite.	3 wks.....	"	"	Am. Jour. Obst., Vol. xviii., 447 .....
Wasselge....	3 mos.....	3-4 r. com. by det. cyst.....	Died 19th dy; hem.....	Bulletin de l'Academie Royale de Medicine, Belgique.....
Muratoor....	Over 2 yrs....	Sac r. entire	Recovery.....	Centralblatt fur Gyn., 1886.....
J. W. Math's n	* short time....	Left.....	* Died 4 hrs.....	Am. Jour. Obst., Vol. xvii.....
C. A. Kirkley.	3 mos.....	Removed.....	Recovery.....	Am. Jour. Obst., Vol. xviii.....
M. McLean..	2 mos.....	"	"	Am. Jour. Obst., Vol. 41.....
E. B. Cragin.	Alive 9 mos...	"	"	Am. Jour. Obst., Vol. 41.....
E. B. Cragin.	"	"	"	Am. Jour. Obst., Vol. 41.....
E. B. Cragin.	"	"	"	Am. Jour. Obst., Vol. 41.....
Tingley.....	2 yrs dead....	Rem. in mass	Recovery.....	Am. Gyn. & Obst. Jour., Vol. 17.....

\*Living. Operation per vaginam and child extracted by forceps. Recovery of mother and child lived.



REPORT  
OF THE  
COMMITTEE ON MATTERS  
OF  
PROFESSIONAL INTEREST  
IN THE STATE,

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INFANT FEEDING.



## REPORT OF THE COMMITTEE

ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

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In the circular letter, sent to each member of the Society, it was stated that the subject of Infant Feeding was selected, to ascertain just how much had been accomplished, by the papers and reports on pure milk, at the various County meetings during the past few years. The questions proposed were designed, primarily to draw out the experience of the members in the use of cow's milk and proprietary food. This report cannot, therefore, be considered in the true sense, a dissertation on infant feeding, except so far as the purity of the milk employed is a part of the subject.

To the list of questions, about ninety replies were received. Of these a number were from physicians devoted to special work and a few came too late to be included in the report. The data furnished was complete and interesting, and although the number of answers is not sufficient to draw absolute conclusions, they indicate the general difficulty experienced in the use of cow's milk.

A notable fact is the large number of replies, comparatively, from the cities and larger towns and the few from members who practice in the rural districts and again, the simplicity of methods usually employed in the country compared with those advocated by city members. This to us does not signify a lack of interest, but indicates the rearing of a young child by hand, when necessary, is less difficult in the country than in the city.

We find from our letters, the number of mothers who nurse their babies in full varies from ten per cent. to ninety-five per cent., with an average of fifty-five per

cent. Those who nurse in part from five per cent. to seventy-five per cent., average twenty-nine per cent., and those who do not nurse at all from two per cent. to seventy-five per cent., with an average of twenty per cent.

With such a proportion, where the baby is not nursed at all, the question of substitution becomes of considerable importance and we find, in the methods pursued, out of eighty reporting, five recommend either nursing entirely or weaning; sixteen the combined method, where the baby is nursed at night if necessary and fed artificially during the day; one suggests treating the mother, after examination of the milk; twenty-eight employ cow's milk, seven cow's milk sterilized, one whey and cream, seven some of the proprietary foods and one goat's milk. The remainder have not answered or have no rule.

To the question, what do you advise when the baby cannot be nursed at all? nine advised some of the proprietary foods, twenty-seven cow's milk, two have no rule, one examines the milk and treats the mother, twenty use modified cow's milk, nine sterilized milk, six condensed milk, one whey and cream, one goat's milk and the rest did not answer.

In both these questions it will be noticed cow's milk or cow's milk modified is advised by the largest number. In most cases, however, it is specified if the milk is pure, if fresh or in intelligent families and the proprietary foods are often spoken of as second choice when cow's milk disagrees.

Question: Is artificial feeding on the increase? Fifty think it is as against twenty-three who do not, one very little if any and six who have expressed no opinion. This result is in accord with most authorities who say artificial feeding has steadily increased during the past twenty-five years.

The question, What artificial food do you recommend and why? was suggested as a means of determining the

extent to which proprietary foods are employed and the reason. We find, in most cases, cow's milk has been tried and the foods are a second choice, often from necessity. Out of eighty reporting thirteen use cow's milk, two sterilized cow's milk, six do not use proprietary foods at all; eight if necessary, eight have not answered and the remaining forty-three employ one or the other of the proprietary foods. The reasons given for this, they are easily prepared, are sterile, keep better in warm weather and are more nearly like human milk.

The next question, In what case do you recommend cow's milk? seems, in a way, a direct contradiction to the answers to the previous question on proprietary foods. Thus fifty-nine advise cow's milk in all cases and we find forty-three advise the prepared foods; two use cow's milk in children under six or eight months; two when it agrees, one in cold weather, one sterilized, two late in nursing, three not at all, one if compelled to, one when people cannot afford a certain artificial food, one in ordinary cases, one in exceptional cases, one when other foods cannot be obtained. Of the fifty-nine who recommend cow's milk in all cases, many specify if the milk agrees, if fresh milk can be obtained, when pure and in intelligent families, indicating even in those who recognize the importance of cow's milk, some conditions are imposed and these conditions also explain the extended use of proprietary foods.

In the use of condensed milk, thirty do not advise condensed milk at all, two in hot weather, twenty-three are classified under the heading, if necessary, those who employ condensed milk because of difficulty in using cow's milk or because cow's milk cannot be obtained pure; four rarely use condensed milk, seven in poor families, one in the early months of nursing, one if already in use, one in ordinary cases, one when other proprietary foods disagree, four in travelling, one in strong and robust children and the balance were unanswered. The rea-

sons given for the use of condensed milk in most cases is an inability to get good cow's milk, because cow's milk disagrees for use in unsanitary surroundings and temporarily when it is thought advisable to discontinue cow's milk. Fifteen members recommend condensed milk as a complete diet.

In view of these facts the next question is perhaps the most interesting and instructive of any asked by the committee, bearing on the subject of cow's milk. Of the whole number reporting forty-one out of eighty employ proprietary foods, of one form or another, when cow's milk disagrees. The balance, except ten members, who do not use proprietary food at all, employ them for some special reason, to assist nature, in the digestion of proteids, late in nursing, etc. Only two recommend proprietary foods as first choice.

The attenuants commonly employed are water, barley and oat meal water and lime water. The majority of the reporters agree with Jacobi, that the addition of barley water is advisable.

In the use of artificial digestants out of seventy-five answers, nine seldom use them, eight unanswered, four not as a rule, five not as a routine, six in weak digestion, twenty-one not at all, ten very little, one as little as possible, three if there are curds in the movements, one in summer months, one in seventy-five per cent. of cases and six, if necessary.

For temporary use in conditions, specified by Vaughn as acute or sub-acute milk infection, when it is necessary to suspend all milk foods, there is no doubt that artificial digestants are of value in beginning convalescence. To employ a food simply because it is easily digested, is in our minds, exceedingly unwise. In cases of weak digestion our efforts should be, as Einhorn says, to level up the diet to the patient's ability to digest and not back away, by the use of foods requiring little natural efforts.

The particular kind of sugar employed by our reporters is in most cases milk sugar. The addition of sugar to cow's milk is necessary in imitating woman's milk in which milk sugar is present in the proportion of six or seven per cent. Cow's milk contains 4.30 per cent.

Sugar supplies the carbohydrate elements of food and for that reason milk sugar is indicated. Sugar should not be added simply on account of its sweet taste, but to furnish a necessary adjunct, hence cane sugar is not advised. Fermentation is more apt to occur with milk sugar present than in the use of cane sugar, a fact recognized in the trades and on that account cane sugar is often employed.

The question, Do you follow any method of modification? was answered by seventy members, forty of whom had no particular plan and of the remaining thirty, thirteen specified the method based on the percentage system, introduced and developed by Rotch, Holt and others; one advised condensed milk and one the maternal feeding glass. Within a comparatively few years an attempt has been made to modify milk accurately, on percentages closely imitating the chemical analyses of human milk. Laboratories have been established, in some of the larger cities, where milk is prepared on a physician's prescription in much the same way that medicines are made up in drug-stores. Those who have had much experience with this method, are enthusiastic and elaborate tables have been prepared, for the home modification of milk, based upon the methods pursued in the laboratories. The number of replies we received, are certainly not sufficient and the detail is not particularly specified in many, to base an opinion as to the adoption of this plan by physicians in general. That all must modify milk is perfectly evident but, whether this is done, simply by general directions to the mother or the percentage system is not apparent.

For years the ordinary modification, observed by most

physicians, was one part milk and two parts water, or some attendant, the proportion of milk gradually increased as the child grew older. West in 1850 added to this mixture, lime water and later Jenner advised the addition of cream, which seemed to him necessary. From this beginning came the more accurate mixtures of Meigs and Biedert, which contained fat, proteids, sugar and lime water in definite proportions, but subject to natural variations in the composition of the cream and milk employed. This Roach sought to overcome, by preparing solutions, by means of a centrifugal separator, of definite and known strength, so that a milk mixture could be made exact and the same each time prepared. Which of the two methods is more applicable and necessary we are not in a position to say from our reports. One point, however, is suggestive; most of the advocates of Roach's plan are in city practice. The reports from the rural districts follow more the plan of simple dilution or a modification based on the Meigs mixture. In cities where milk is twenty-four or forty-eight hours old, and changes have occurred in the proteids, it would seem more necessary to employ the percentage method than in the country where milk is usually fresh and pure. An accurate modification is advisable also when children are over-fed, which is the rule. With the many perfectly natural variations in human milk, from one day or one hour to another, it is difficult to determine just what the normal standard of human milk, upon which the percentage method is based, should be. Milk is not a staple product which remains always the same. In milk laboratories, where frequent chemical examinations of cow's milk are made, a basis for definite calculations may be obtained but how this can be accomplished, with the general milk supply is difficult to understand, when very often one does not know the source of the milk or the name of the milkman. Then, too, the variations, in fats and proteids, found in the different breeds of cows would



make accuracy quite impossible and directions given for preparing the milk of the Ayrshire or Holstein would not apply to the Jersey, where the fats and proteids are much higher. That a fairly accurate modification, when possible, is desirable we cannot deny, for at least it places the baby's diet much more under the physician's immediate direction and supervision, than any other method known, but, the question occurs, if the milk is pure and fresh is an accurate modification necessary? Or, in other words, is not the difficulty in adapting ordinary milk due more to bacterial changes than to the actual chemical composition? This question is far too great to attempt to decide now, but in our study of milk, this phase of the subject is presented for your careful consideration.

In the preparation of milk for infant feeding our question on sterilization was answered by eighty members of whom thirty-four employ sterilized milk, forty-one do not and five have no rule. By some the use of sterilized milk is qualified, to be used temporarily for specific purposes in hot weather.

Forty-two recommend Pastenrized milk, thirty-five do not and three have not answered. Forty-eight employ raw milk, twenty-four do not and four have no rule. There are more qualifications in the use of raw milk than either sterilized or Pastenrized milk and purity is recognized as a very important factor.

Question No. 10: Have you had cases of scorbutus or rachitis due to artificial food? was answered by seventy-seven members. Twenty-four report a total of thirty-six cases and fifty-three have no case. The food employed in the thirty-six cases is given as follows:

Mellin's Food, .....	3 cases.
Sterilized Milk, .....	2 cases.
Poor Cow's Milk, .....	3 cases.
Condensed Milk, .....	17 cases.

Starchy Food, . . . . .	1 case.
Malted Milk, . . . . .	2 cases.
Artificial Food (kind not given), . . . . .	2 cases.
Improper Feeding (cake, candy, etc.), . . . . .	5 cases.
Not Stated, . . . . .	1 case.

This result is in accord and confirms the report of the committee appointed by the American Pediatric Society a few years ago, who found the great majority of cases of scurvy and rachitis, which are the extreme of faulty nutrition, are due to prepared foods.

In presenting the answers to question No. 12, we wish to refer briefly to some of the points brought out in our previous questions so that we may better appreciate the answers. In securing a satisfactory milk-supply what would you recommend to your patients? In the use of artificial foods, condensed milk and artificial digestants the consensus of opinion is in favor of cow's milk, but proprietary foods are used by a large number, about half, 41-80, for longer or shorter periods, because cow's milk does not agree, and is difficult to obtain pure. That physicians appreciate the importance of pure cow's milk and would use it much more than they do, if they could get it, is fully brought out in question No. 12; out of eighty reporting sixty-two members recommend milk from a good dairy, when the barns, herds, utensils are clean and an effort made to produce pure, healthy milk. Two facts stand out plainly, we want good milk, but because we don't get good milk we are compelled to use the proprietary foods. And the reason we don't get better milk is also evident in the answers to question 13 in which, with seventy-eight reporting, fifty-nine say no public effort is made to improve the milk supply. Three of these are satisfied that the milk is good, leaving fifty-six who are not satisfied and who say nothing is being done.

Four speak of efforts by Health Boards and physi-

cians, one by the Grange, six by dairymen, with good results, seven by inspection, one by the Milk Commission of the Hartford County Medical Association.

Much of the difficulty in infant feeding is explained by these figures. While the Committee do not put forward the results of their investigation as absolute facts, particularly in the last questions, we do present these figures as the individual experience of the members replying to our questions. We know in Hartford and in other cities an effort is being made by physicians and dairymen and many in these places have reported no work has been done. As it applies to their own work and the milk with which they are familiar, this report is undoubtedly true but the fact is none the less startling that so many are in a position to say they know of no public efforts to improve the milk-supply. It would seem the attempts at improvement need more encouragement than they receive.

To the committee there seems an entire lack of uniformity in the methods of feeding young children, as practiced by the physicians replying to the questions proposed. That this should be so is evident, when we consider the one fundamental principle, the foundation of success, underlying all methods and procedures is pure cow's milk and this, from the reports, we don't get. Of what benefit to the child is a correct mathematical formula for preparing milk if the milk is teeming with bacterial growth? We are accustomed to think of human milk as the ideal food but, I venture to say, if it were possible to consider this milk exposed to the same influences as cow's milk, we would have quite as much trouble as in using cow's milk.

In the first place cow's milk is an artificial food and differs from human milk. Bunge's investigations on the comparison of tissues show the mammary gland abstracts from the blood very nearly the amount of salts

found in the blood and so there must be a great difference between woman's milk and cow's milk. Chemical examinations show a difference in the fats, solids and salts and lately Schultze following the experiments of Bordet, Metchnikoff and others, has demonstrated that the proteid molecules of various milks differ from one another, proving each animal species has its own peculiar milk and that no modification will make them alike. He found each milk has its own lacto-serum, which coagulates its own particular milk only. By injecting one lot of rabbits with the serum of cow's milk, a second lot with goat's milk and a third with woman's milk Schultze found that after three weeks of treatment the serum of the rabbits treated with cow's milk acquired the power of coagulating the milk with which it had been injected and that only. Fisch has also obtained the same results.

To make cow's milk more closely resemble human milk, chemically, we add water or some attenuant to lower the excess of proteids, and in preparing our mixture we increase the proportion of fat by the addition of cream. This done and the acid reaction of cow's milk made alkaline by lime water or bicarbonate of soda, we have a mixture very closely resembling human milk, but it is not human milk. Simple dilution does not change the proteid and the size of the curd, when precipitated by acid, is just the same as before the dilutant was added. The proteids are the most important element in milk and at the same time the most difficult to manage. According to Holt, the average amount of the fat of cow's milk which a healthy infant can digest varies from two to four per cent. Beginning with two per cent. in the early days of life the amount may be increased to three per cent. at one month and to four per cent. at five or six months. No further modification in the fat is necessary.

As far as the actual digestion is concerned, (we would not say nourishment,) in proprietary foods the element

of proteid digestion is more nearly solved than we are often able to in employing ordinary cow's milk. As food substances, considered by the standard of normal caloric values, no one can compare milk dried and put up in tin cans with clean, healthy cow's milk, but unfortunately we do not often get this kind of milk. In the preparation of most of the preparatory foods where cow's milk is the basis, no detail of cleanliness in the cows, stables and attendants is neglected and usually the product is sterile—a most important factor in infant feeding and a condition present in human milk. Ordinary cow's milk, as received in the cities, is at least twenty-four hours old and is very far from sterile; its reaction is strongly acid and lactic acid fermentation has occurred.

The digestion of proteids, under normal conditions, is a matter of some difficulty and a brief study of the subject as found in adults will explain why we have so much trouble in the proteid digestion in young children. From the studies of Langendorf and others, who have found pepsin and hydrochloric acid in the stomach of infants, possessing the usual digestive properties on proteids as in the adult we are justified in adopting the action of the adult stomach as a guide or at least a suggestion of the normal digestion of the proteid elements of food, in the infant.

Stewart divides the digestive period into two stages. During the first the acidity of the gastric juice is feeble, due to an insufficiency of hydrochloric acid. With the free elaboration of hydrochloric acid in the second stage, lactic acid, if present, disappears and as soon as the food becomes saturated with hydrochloric acid, the transforming of the proteids into peptones and parapeptones is accomplished.

Hydrochloric acid has also another important function, which by some is regarded as the most important, that of maintaining the food contents of the stomach in an aseptic condition. Lactic, acetic and butyric acids

are not found when hydrochloric acid is present except in a milk diet where lactic acid is in excess.

If lactic acid is present in milk the digestive and anti-septic properties of hydrochloric acid are naturally decreased and from the excess of acid there would be a condition of hyperacidity as found in cases of indigestion. Hemmeter says an hyperacidity inhibits normal intestinal digestion quite as much as anacidity, where no acid is present. As infant digestion is in most part intestinal, it is evident, with an excess of lactic acid or hydrochloric acid, trouble is likely to ensue and the more reason why an infant's food should be sterile and free from lactic acid. Another point; woman's milk normally coagulates in the child's stomach in fine flocculi, but if the stomach is very acid it coagulates in solid curds. The curd of cow's milk is larger and heavier than woman's milk and the proportion would be maintained.

**Bacteria:** Ordinary cow's milk swarms with bacteria, the direct cause of lactic acid fermentation. Prof. Conn has isolated about two hundred different species, the majority causing fermentation and Russell has found fifteen forms which produce lactic acid fermentation alone and are not considered pathogenic.

Bacteria in the stomach, introduced from without in food are harmful, in digestion, as pointed out by Minkowski, who says from bacteria:

1. Substances may be formed which irritate the mucosa.
2. Gas may be formed, causing distress and mechanical insufficiency of the stomach muscles.
3. The fermentation may give rise to toxins.
4. Putrefaction of proteids may produce alkaline bodies that will neutralize the hydrochloric acid secreted.

Aside from the formation of lactic acid in the milk

itself, we must recollect that errors in diet in quantity, as well as quality, are very important causes of hyperacidity, but in this discussion on milk time will not permit of more than calling attention to this important fact. In our report forty-eight physicians would recommend raw milk, if pure, in preference to either sterilized or Pasteurized milk. In 1825 Doctor Dewees of Philadelphia claimed good, fresh and pure raw milk, properly prepared, was the best food for young children on the ground that raw milk is nature's method and the less we interfere with nature the better. In the New York Medical Journal for September, 1900, is an article by Doctor Palmer of Chicago, on the feeding of seven hundred infants on fresh raw cow's milk modified, during the hottest months of the summer and in the most thickly settled tenement districts with a mortality of only three. In this work the milk was the best to be obtained, prepared in nursing bottles at a laboratory and delivered on ice.

Pasteur taught us the reasons for the fermentation of milk; sterilization and Pasteurization have shown the benefits of preventing fermentation by lessening bacterial growth. Absolute cleanliness by preventing the entrance of bacteria is better than sterilization or Pasteurization. Unfortunately, with our present dairy methods this seems impossible.

There are then two conditions necessary in successfully feeding a child on cow's milk:

First. The proportion of fats must be raised by the addition of cream and the high percentage of proteids must be lowered by dilution.

Second. The milk employed must be as nearly sterile as it is possible to make it.

How best to secure this result is a problem which must be solved before we can do away with proprietary foods and place infant feeding on a safe and scientific foundation.

Legislation has been tried and has not succeeded; inspectors have been appointed and they have not given us milk we require.

In Hartford, through the efforts of the City Milk Inspector, the quality of milk compares very favorably in chemical tests and purity with any city of its size, but even this is not of the grade we need for our special work. One of the best and cleanest farms has an ordinary infection of 300,000 bacteria per c. c. Milk for infant feeding should receive the most painstaking care by the most intelligent men and the barns, herds and utensils should be scrupulously clean. To produce the best milk expenses are increased and dairymen furnishing pure milk should be paid more than for ordinary milk. We should buy pure milk as we buy the best drugs, for definite well defined purposes.

Through the efforts of a commission appointed by the Hartford County Association we have two dairies furnishing a high grade of milk for infant feeding. They are planned on the scheme proposed by Doctor Coit, in which by cleanliness the entrance of bacteria into the milk is prevented and, keeping the milk on ice, in sealed bottles until delivered. At one farm a laboratory has been established and each day cultures of milk are taken and an accurate record is kept of the number of bacteria present. During the past summer the average count was about 2,000. With this milk, properly managed in the home, results are good. As we lower the bacteria still more, results will be better.

For the poor and ignorant, the public milk laboratories for the distribution of pure modified milk each day as practiced in New York, Chicago, Yonkers, Buffalo and other cities, as a charitable institution, solves the problem and such charities are indeed worthy.

We now come to the end of the matter, really the most important part of the subject, What are we to do about



it? The facts brought out, in this report are not essentially new; we know it all, we learn from our every day's experience, and the ground has been gone over time and time again and as yet we have not the milk we require. Exactly the same principles apply to bacteria in milk as to any living tissue. In every department of medicine we recognize the power of bacteria to destroy.

To the committee, the most feasible plan yet proposed, is an agreement between physicians and dairymen, based upon a definite and well defined contract in which the dairyman agrees, in consideration of the proposed support of physicians, to produce by care, study, unceasing watchfulness and a true appreciation of the importance of the subject, a pure wholesome milk free from bacteria.

This plan interferes with no one's rights, it compels no one to do what he thinks he ought not to do, but is a fair and reasonable proposition to the dairymen who observe the regulations, which mean simply cleanliness, to sell milk at a better price than ordinary. If one farm only of this character could be established and maintained in each town in the State we are very sure with the milk from these farms infant feeding would be less difficult than it is at present.

WALTER G. MURPHY,  
JOHN G. STANTON,  
GIDEON C. SEGUR,  
Committee.



MEDICAL PAPERS.



# REPORT ON PROGRESS OF MEDICINE.

## I.

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C. J. BARTLETT, M.D.,

NEW HAVEN.

A review of the literature of the past year shows no striking advance in any one branch of medical science, but rather indicates a steady progress in many directions. This progress has been, in fact, so great that in a brief paper it is possible to do little more than mention a few of the factors that have helped to form it. Which of these are to be considered of chief importance as indicating advance naturally depends largely upon the individual judgment. It seems to me that the increase in our knowledge of the causation and prevention of disease and of the exact pathological conditions present in certain diseases is the fact to be emphasized.

**LEUKEMIA.** During the year 1900 there appeared the results of some excellent work in the study of the diseases of the blood. The most notable contributions were by Löwit, and by A. E. Taylor, on leukemia. The former by special staining methods in the case of leukemic blood has shown the presence of peculiar bodies which he interprets as protozoa. He was unable to cultivate these outside the body, but from his studies he concludes that they are the causative agent in the disease.

The investigations of Taylor include not only the study of the blood, but also the condition of the tissues in this disease. The results are based on the examination of sixteen cases. As a summary to the work, he found the red blood corpuscles always reduced in number, these varying from 4,000,000 down to as low as 800,000. This

decreased number of red blood corpuscles existed in cases apparently cured. As a rule the percentage of reduction in the hemoglobin was greater than that in the number of the corpuscles. It is interesting to note that two cases gave Bremer's stain for diabetic blood, though no sugar was present in the urine. Poikilocytosis was present to some degree in all of the cases. Nucleated red corpuscles were present in all but one. The number of these varied from less than 10,000 to nearly 70,000 per cubic m. m. One of the first effects of arsenical treatment was a reduction in the number of the nucleated red corpuscles. His conclusions regarding white corpuscles correspond closely with the generally accepted views and will not be quoted here. As to the cause and nature of the disease, he is inclined to favor the so-called leukocytic theory, namely, that the pathological condition of the blood is the primary lesion, especially in the myelogenous form of leukemia, and that the lesions of the fixed organs are secondary to this. The treatment was arsenic, to which in certain cases bone marrow was added. In only one case, did the bone marrow combined with the arsenic produce better results than the arsenic alone.

Dock (Phil. Med. Jour., Mar. 31, 1900,) has reported fifteen cases of chronic leukemia from his hospital experience, and five others in private practice. He concludes that leukemia is more common in this part of the world than abroad. The average age of the patients was 41.6 years. The only etiological factor of importance which he could discover was a history of chills and fever. In only four of the fifteen hospital cases was the diagnosis suspected before the patient entered the hospital. The number of leukocytes was above 200,000 in fourteen of these fifteen cases.

In this connection, I wish to add that it appears evident that more frequent examinations of blood are showing

that leukemia is not as rare a disease as it has been generally considered to be. During the past fourteen months, among a very limited number of blood counts, I have found leukemia four times, the diagnosis having been made in only one of the cases previous to the blood count. And during the same time I have seen blood smears from two other cases of the same disease from patients in the city (New Haven).

**PERNICIOUS ANEMIA.** Dr. Adami, of Montreal, has made some interesting observations on the causation of pernicious anemia, and his conclusions, while not to be definitely accepted as showing the cause of this disease, are certainly well worth considering. He has found in the livers of patients dead from pernicious anemia similar organisms to those which he had previously found in livers in cases of cirrhosis. He thinks the cause of pernicious anemia is a sub-infection, and he explains his meaning of this term as a condition where a large number of bacteria enter the blood, and as a result there is produced an excessive activity of the glandular system, and other organs, in the attempt to destroy the bacteria, and chronic inflammatory changes are thus set up. He had previously attributed cirrhosis of the liver to this process of sub-infection, and according to the views now expressed he considers that such a sub-infection, occurring through the gastro-intestinal tract, causes pernicious anemia.

**USE OF IRON.** Because of the use of iron in many diseases of the blood, the experiments of Hoffmann (*Virchow's Archiv.*, Vol. CLX., page 235,) concerning the part played by iron in the formation of blood are of interest. He employed in these experiments ninety-eight rabbits. The work includes the study of the absorption, and the manner in which the iron reaches the various organs; the value of the different preparations of iron; its action both in health and in disease; the estimation of the hemoglobin and the counting of the number of corpuscles; and

a histological study of the so-called hematogenic organs. He concludes that iron is absorbed from the duodenum, no matter how administered; that it combines with the leukocytes, forming with them an albuminate, in which form it is not toxic. It is found in abundant quantities, especially in bone marrow, also in the spleen and liver. In the marrow, cells carrying iron are present in large numbers. After loss of blood, a new formation of red corpuscles is more rapid and the marrow is richer in all its constituents in those animals to which iron was given, than in those to which it was not. Hemoglobin is less rapidly replaced than are the corpuscles. There is no production of hemoglobin independent of the formation of the corpuscles. This shows that the action of iron is to stimulate the physiologic activity of the bone marrow, the ripening of the young forms of corpuscles in the marrow and their entrance into the circulation as non-nucleated corpuscles being hastened. The effect of iron does not seem to depend upon the preparation used but upon the quantity absorbed.

Before leaving the subject of the blood, I would mention a very recent contribution to our available knowledge of this in disease. This is a book on the "Clinical Pathology of the Blood," by Prof. Ewing, of the Cornell Medical College. A hasty glance through it indicates that it will prove of value.

**MALIGNANT GROWTHS.** There has been a continued activity in the study of malignant growths. Undoubtedly the results obtained at the Cancer Laboratory at Buffalo are of particular interest to us, and we are fortunate in having recent reports from this institution in the shape of a publication by Dr. Gaylord, in the May issue of the American Journal of the Medical Sciences, and in an address delivered by Dr. Roswell Park at the American Surgical Association, in Baltimore, in the early part of May. The value to be attached to these reports depends entirely upon the extent to which the conclusions of the



authors can be accepted as proven. Unlike the Italian school of investigators, they find the causative agent in the production of cancer to belong to the lowest forms of animal, rather than vegetable, life. These organisms vary greatly in microscopic appearances. They describe them as closely resembling fat droplets, and claim to have found them constantly around the periphery of growing cancers, and also in the neighboring lymph nodes before the epithelial deposits could be detected in these nodes; thus indicating that they travel ahead of the epithelial cells in the dissemination of the disease. Moreover, they find these bodies in all of the organs, including the blood, from all cases dying of cancer or sarcoma. Further, in all cases of carcinoma and sarcoma in which cachexia was well-marked the organisms, especially the younger forms, can be detected in the peripheral blood. By taking the abdominal fluid from a case of carcinoma of the abdomen, and observing that these bodies were present, then allowing this liquid to stand in the thermostat for three weeks and injecting it into the jugular vein of a guinea-pig, they obtained after three weeks and a half, a primary adeno-carcinoma of the lung; but they were unable to cultivate the organism directly from tumors upon any of the ordinary culture media. The cultivation of it, so far as is indicated in these reports, appears to have been unsatisfactory. Gaylord, however, feels sure that it belongs to the protozoa, and has nothing in common with the yeast organisms described by others.

However much we may admire the enthusiasm of these investigators, and are bound to consider their reports carefully, I think we must admit a feeling of disappointment at the results as given. There is a long step between the injecting of the peritoneal fluid, undoubtedly containing tumor cells, from a case of abdominal cancer, into a guinea-pig and in a single isolated case finding a new tumor formation, and the proving that microscopic

objects present in this fluid, as well as in cancerous growths, are the cause of the same. Until any organism shall have been isolated from malignant growths, repeatedly injected in pure cultures with a resulting new formation of malignant growths, and the recovery of the organism from the tumors thus produced, it cannot be accepted as the cause of such growths.

Dr. Adam, of Montreal, in concluding a scholarly address before the Yale Medical Alumni Association a few months since, on the "Causation of Cancerous and Other New Growths," says (Yale Med. Journal, April, 1901, p. 354.): "I would urge, then, that at the present time, when after all these years of labor no causative agent of malignant growth in general has surely been determined, that line of research which promises surer results and greater profit on the part of clinicians as well as of laboratory investigators, lies in the direction of testing various methods of arresting the growth of the tumor cells without injury to the organism in general. Herein, it seems to me, that Coley has chosen the better part. But over and above all I cannot but feel that the greatest benefit to the patient, the greatest triumph and satisfaction to the practitioner, will be for some years to come the recognition and successful removal of malignant tumors at the earliest possible date. Aye, and what is more, the removal of benign tumors in general before they have taken on possible malignant characters."

**BUBONIC PLAGUE.** Because of our relatively closer relations with the far East, brought about by the events of the past few years, we are bound to take a more active interest in bubonic plague than heretofore. The bacillus causing the disease is not only known, but its great virulence is recognized. The danger connected with the organism, however, does not seem to justify such drastic action as Austria is said to have taken by absolutely forbidding the scientific study of the bacillus in that

country. The value of such scientific knowledge has been well demonstrated recently at the University of Michigan by the recognition of the first case appearing there and the entire prevention of its spreading to others.

Clemon has reviewed our knowledge regarding plague in the lower animals, and their part in spreading the disease. This indicates that rats frequently become infected, often by means of fleas or other insects, and that the rat-and-flea combination appears to be an important factor in the spread of the disease.

Haffkine reports on the preventive inoculation for plague. He notes as an example of what may be done, that at Hubli nearly all of 50,000 inhabitants were rapidly inoculated. The difference in mortality of those inoculated and uninoculated was from eighty to ninety per cent. He believes that the prophylactic has the same effect in man as in laboratory animals. It appears, unfortunately, to have no effect upon cases in which the plague is incubating at the time of inoculation. He did not determine the length of time that the immunity thus obtained lasted.

**DIPHTHERIA.** The added results of serum treatment of this disease simply verifies the claims of the past. For instance, Richardière reported to the International Medical Congress a series of 1,778 cases cared for at the Hôpital Trousseau with a percentage mortality of 15.7, or excluding those dying inside of twenty-four hours, 11.5 per cent.

Contrary to the general tendency to give large doses of anti-toxin, Musser prefers to give it in small doses, and, when necessary, at frequent intervals. He claims to obtain as good results in this way, and to avoid the urticaria and general symptoms that appear to be more common after large doses.

A notable contribution to our knowledge of this disease has recently appeared, although I can only mention

it here. I refer to "A Study of the Bacteriology and Pathology of Two Hundred and Twenty Fatal Cases" of Diphtheria, by Councilman, Mallory and Pearce. All of these cases came to autopsy in the so-called South Department (for contagious diseases) of the Boston City Hospital, and any one familiar with the reputation of the authors will know that the subject has been exhaustively studied by them.

**MALARIA.** The further work on this subject fails to exonerate the unfortunate mosquito, which has been on trial for the past few years as the chief sinner in the transmission of the malarial parasite. It seems rather to prove in two different ways that it is guilty of being one, if not the only one, of the malarial carriers; first, negatively, in that persons presumably susceptible, have been free from the disease in intensely malarial districts by merely protecting themselves from mosquito bites; the second, positively, by allowing mosquitoes to bite a person having the disease in one locality, carrying these to some distant place, as from Italy to England, and having the disease reproduced in a second person bitten by the same mosquitoes in the latter place.

One of the main questions of malarial prophylaxis becomes then how to destroy the mosquito or prevent its multiplication. Lavanan and others have shown that petroleum or fresh tar poured onto the surface of water will destroy the larvae, but for practical purposes it would seem that the old measures of the avoidance of swampy ground, and the securing of proper drainage are the means to be relied upon at present.

**TYPHOID FEVER.** Anything new regarding typhoid fever is always welcome. One of the questions that has been raised is as to the possibility of the lower animals acting as a host of the typhoid bacillus, even though they are not susceptible to the disease. Stokes has tried a series of experiments by feeding to animals cultures of

typhoid bacilli. He tried dogs, white rats, a calf, a pig, guinea-pigs, and rabbits. Perhaps the most heroic test was the feeding to a pig of one litter of a typhoid culture every day for a month, during which time the feces were examined daily, and the urine at six different times, for the typhoid bacillus. It was, however, not found at all in either feces or urine. The animal was killed three days after the last feeding of typhoid bacilli, and none of these were found either in the stomach or intestine, but a few colonies were obtained from the liver. If these experiments can be accepted it is evident that the lower animals which were experimented with do not act as hosts of the typhoid bacillus.

Additional work has been done on the Widal's reaction, but no uniform method of its application has been accepted. Diagnoses made by means of this reaction do now, and always must, depend largely upon the experience and accuracy of the individual bacteriologist. Work has also been done upon the so-called anti-typhoid bodies in the blood, but the question is not in such shape that it can profitably be discussed here. Further investigations regarding the true significance of the rose spots in typhoid fever have been carried out. These indicate that the rose spots are true specific lesions, due directly to the presence of the typhoid bacilli in the tissues in those localities.

The advantage to be gained from preventive inoculation against typhoid fever, under conditions where there is a great liability to infection, is still problematical. The most satisfactory are perhaps those from portions of the British Army in South Africa. Prof. Wright, in July last, published in the "Lancet" the results of such anti-typhoid inoculation among the troops in the besieged garrison at Ladysmith. Those inoculated lived under exactly the same conditions as the uninoculated. Among those not inoculated the proportion of cases of the disease was one to 7.07, against one to 48.7 among the in-

oculated; the number of deaths, uninoculated soldiers one to thirty, inoculated one to two hundred and thirteen. The number of cases is of course too small to draw any definite conclusions from.

**TUBERCULOSIS.** Regarding tuberculosis, the main fact to be reported is one with which you are all familiar, and which accordingly I shall merely mention. I refer to the general advance, all along the line, in the prevention of the disease, its earlier recognition, and the establishment of sanatoria for the treatment of the disease in the beginning stages. It is well worth recording that the members of this Society have been active in the movement.

Beck, as well as others, has been making what I believe to be a most important study. This is an examination of the milk as it is purchased in the market, for (1) the determination of the presence of bacteria, particularly of tubercle bacilli, in milk; (2), to find out whether the destruction of these bacilli, particularly the tubercle bacillus, is possible by a single boiling, or whether prolonged boiling is necessary. In the Berlin milk which he examined, he found only about twenty per cent. of the specimens free from disease-producing germs. He found streptococci in sixty-two per cent. and tubercle bacilli in thirty per cent. A single boiling of the milk he found not to be sufficient to destroy all of the germs. A three minutes boiling is necessary to kill the tubercle bacillus. This at once raises the question as to whether Pasteurizing milk destroys tubercle bacilli. The opinion I have heard expressed by those in the best position to know is that in the process of Pasteurization they (tubercle bacilli) are either actually destroyed or so changed as to be of lessened virulence.

I appreciate that I have merely touched upon a few of the many indications of advance in this profession. They may be enough, however, to indicate how vigorous and rapid the normal growth of the science is.

## II.

### PROGRESS IN PSYCHIATRY.

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A. R. DEFENDORF, M.D.,

MIDDLETOWN.

Contrary to the custom of the reporters of the progress of medicine in previous years, the writer takes the liberty of presenting to you the progress in one special branch; namely, that of mental medicine or psychiatry. The motive for this arises from the fact that most practitioners are not in a favorable position to know either the progress or the present status, in medical science, of psychiatry.

In the short time at our disposal I shall attempt to accomplish two objects; one, to give you a brief outline of the history of psychiatry to the present time, and the other, to give you some conception of its present status.

While the whole history of the progress of psychiatry does not extend beyond the nineteenth century, insanity has been recognized from the earliest times. Among the ancients, previous to 400 B. C., the age in which Hippocrates, who should be considered the creator of mental medicine, flourished, insanity was regarded as the possession of man by a benevolent or an avenging deity. Instances of this are found in the Bible, the two best known being those of Saul and Nebuchadnezzar. Hippocrates, and following him in the Graeco-Roman period, Asclepiades, Celsus and others were so far advanced in their conception of medicine that they not only asserted the dependence of mental disorders upon conditions of the body, but the latter even recognized different forms of the disease, calling attention to acute alienation with

fever and chronic alienation without fever (mania and melancholia).

But with the collapse of ancient learning in the middle ages these advanced ideas entirely disappeared, giving place to philosophical ideas on the one hand and religious dogma on the other, utterly crushing the existing basis for the scientific study of mental diseases. The insane were thought to be possessed by demons and to dispel which the good offices of the priests were necessary. Failing of recovery by this means, the unfortunate victims were tortured or executed, many even being burned at the stake.

The resurrection of science and especially the rise of medicine brought with it fresh interest in psychiatry, but yet centuries passed before it became generally recognized that the disordered mind should be investigated and treated by the physician. With few exceptions the real alienist did not appear until the last of the eighteenth century and even then to have said of a man that he was insane, sufficed for the diagnosis, prognosis and treatment. The erection of special institutions for the care of the insane, to be supervised by physicians, was perhaps the first move toward the adoption of scientific views in psychiatry, among which institutions were the Bicetre in Paris and York Retreat in England, both established at the very end of the eighteenth century. Beginning with the work of the celebrated Pinel of the Bicetre in 1793, psychiatry has during the past century made rapid advances, so that at the present time we know that all disturbances of the mind are only mental manifestations of more or less remote changes in the brain, especially in the cortex of the cerebrum. This progress has taken place along the lines indicated by the advance in general medicine, aided by results of observations in pathological anatomy, physiology and psychology.



Our experience with internal medicine teaches us that every definite symptom complex has an underlying pathological process, but furthermore the principals of general pathology require that we take into consideration besides the pathology, the cause, the symptoms, course and termination of the disease, if we are to understand the disease entity. The original method by which almost all diseases have been first recognized, has been close observation at the bedside. By this clinical means we have had to learn how to pick from the innumerable variety of individual symptoms those that are fundamental and essential, and thereby arrive at some classification. In this way definite diseases have been recognized as clinical entities and differentiated years before a pathological anatomical basis has been demonstrated.

In psychiatry this method of research has been, and still is, the most important means at hand for the recognition and differentiation of different psychoses. Just as in internal medicine, phthisis, diphtheria and malaria were recognized by this method as clinical entities long before the characteristic lesions with their specific agents were discovered, so in insanity paresis was recognized clinically many years before its characteristic pathological anatomy was discovered. As early as 1825, the French investigators, especially Bayle at Clarendon under the inspiring teaching of Esquirol, began to differentiate clinical dementia paralytica or paresis; it is the history of the development of this disease more than that of any other, which marks the advance of psychiatry for the first sixty years of this century.

Following the discovery of paresis, early in the century, monomania, now called paranoia or progressive systematized insanity, was described at length by Esquirol and for many years, until the time of Morel, who

established it as a definite clinical entity, was the center of contention. It, however, received still further elucidation at the hands of Snell in 1889.

Vorsin, another pupil of Esquirol, made a thorough study of idiocy. Epileptic insanity, although described by Brevais in 1828, was not well studied until taken up by Morel and Falret in 1860. It has since been the subject of more exhaustive study, especially by Krainsky, who in 1898 isolated a toxic material called carbamate of ammonia, which he believed to be the chief causative factor of idiopathic epilepsy.

The mental conditions accompanying hysteria received special attention from Charcot and his pupils. Attention was first directed to the insanity of degeneration by Morel, but it was not well defined until the time of Krafft-Ebing, who grouped together hypochondria (chronic neurasthenia), impulsive insanity and compulsive insanity.

Periodical insanity, although recognized at an earlier date, received its first careful attention from Falret and Baillarger in 1866 under the name of insanity of the double form or circular insanity. It was not well described until by Ritti in 1883. The disease has more recently been the subject of exhaustive study by Kraepelin, who now calls it manio-depressive insanity. Another disease, the comprehensive knowledge of which with an admirable clinical picture also came from Kraepelin, is dementia praecox. While discovered by Pick in 1881 and described later by several writers including Hecker and Kahlbaum, it did not become a clear and sharp clinical picture until the publication of Kraepelin's sixth edition in 1899.

Dating from 1881 there appeared a considerable group of cases of insanity accompanying infectious diseases, including small pox, measles, influenza, erysipelas, etc., called the infection psychoses, supposed to be due to the toxic effects of bacterial toxins produced in these dis-

eases. In 1854, an English physician by the name of Weber described a mental state arising from exhaustion, calling it collapse delirium. From this a group of psychoses called exhaustive, psychoses have arisen which are supposed to be due to the excessive abuse and insufficient reparation of nervous elements. They follow especially exhausting diseases, typhoid fever, pneumonia and child-birth. They have recently been well described by Binswanger.

Toxic insanity, which includes psychoses arising from the ingestion of toxic material, was recognized early in the century, but failed of adequate description until within the past fifteen years. We include here insanities arising from alcohol, morphine, lead, cocaine, etc. During the past ten years there has been a growing tendency to find a pathological basis for many psychoses in intoxication produced by a toxine arising in the body as the result of faulty metabolism. The mental state accompanying myxedema forms one of the types of such psychoses. As our knowledge of these conditions with this one exception is purely speculative, no further mention will be made of them.

In reviewing the gradual development of psychiatry during the past century, I have purposely avoided the mention of names of various psychoses which have sprung into existence and later disappeared without leaving an impression. I will, however, call your attention to some psychoses which still exist in the mind of the general practitioner, but which have been given up by the most advanced psychiatrists. I refer especially to puerperal insanity, the name applied to all psychoses which appear during the puerperium quite independent of their symptomatology, course or outcome; some cases running a rapid course with exhilaration or depression to recovery or death, while others with a gradual onset progress by a long course to recovery or states of dementia. Another similar type of psychoses is the

pubescent and climacteric insanities, psychoses in which are grouped cases occurring during those periods of life without much regard for the symptoms which they present or their outcome.

Looking back over the past century then, we find that all of these different psychoses have been hewn out of four great groups existing at that time, namely, mania, melancholia, dementia and idiocy. You will notice that the names of mania and melancholia have thus far been avoided by the writer. While many psychiatrists of to-day still retain a place for mania and melancholia among their functional psychoses, meaning by that psychoses whose pathological bases are still unknown, there are others, chief among them Kraepelin, for whom these are only general terms for the symptoms, excitement and depression, which may occur in any psychoses, but which do not stand for any disease process. The vast majority of the cases of insanity which formerly were called mania or melancholia, belong to groups of dementia praecox, periodical insanity, or melancholia of involution.

After considering briefly the position of pathological anatomy, physiology and psychology in the advancement of psychiatry, I shall refer more in detail to dementia praecox and periodical insanity.

Thus far psychiatry has received but little aid from pathological anatomy, because our knowledge of both the anatomy and pathology of the brain is still so meager that a correlation of its functions with the anatomical facts is impossible. Meynert, the great Austrian anatomist, was in 1884 the first to intimate the existence of cerebral localization, denoting cortical areas in which external impressions from the various peripheral organs of sensation are received. His ideas received greater definition at the hands of Ferrier and Monk. It remained for Flechsig, however, to demonstrate by his methods, study of fetal development, the existence of definite sen-

sory pathways, distinct cortical areas and well defined association tracts. These areas are: the somatic sensory area, areas for the sense of smell and taste, those for sight in the occipital lobe and for hearing in the first temporal convolution. He also defined intellectual centers or association-centers, the diseases of which gave us mental disturbances, these intellectual centers being the frontal, insular and posterior centers.

Next in importance anatomically was the establishment of the neurone doctrine in 1886-7 by His and Forel, which emphasized the unity of the nerve-cell and its prolongations as an element in the nervous system. Upon the neurone doctrine there developed an ingenious theory, which was expounded in this country by Dercum, that the neurone or its parts had a retractive power, whereby the terminal processes of different neurones or groups of neurones were withdrawn from each other, breaking contact, as it were. Upon this was based a theory of sleep by Dercum; and by Boris Sidis, a theory of the dissociation of ideas explaining certain amnesic states. But without the knowledge that the cell processes are really capable of retraction, this theory has found but few adherents.

The researches of Apathy at Naples upon the invertebrates, in which he shows that fibrils from some nerve cells pass directly through or end in the bodies of other cells, has had, in some quarters, a tendency to disapprove the theory of the unity of the neurone. This, together with the results of the work of Nissl and others in simple and experimental pathology, has led to the assertion that the most important portion functionally of the cerebral cortex lies outside the nerve-cell body, between it and the fibres and the blood-vessels, and consists of anatomical elements still unknown to the anatomists; but it is assumed, from the results of the work upon invertebrates, that it is composed of very fine fibrils which pass from cell to cell.

The statement that pathological anatomy had been of little value in the advancement of psychiatry ought not to carry with it the inference that little has been done in this field. On the other hand, a vast amount of research has been carried on with the result that, as already indicated, there have been found characteristic pathological lesions for several different psychoses. Chief among these is dementia paralytica or paresis; others are senile dementia, idiocy, alcoholic insanity and some of the infection psychoses. The most valuable work, and especially that upon the cerebral cortex, has been accomplished within the past ten years.

Until the discovery of Nissl's method of staining nerve-cells in 1896, investigators were unable to rule out the possibility of artefacts in their preparations. This discovery, together with animal experimentation, in which one has absolute control over his material, opened a new and very important field for research. Among the investigators in this special field should be mentioned Nissl, Marinesco, Levi, Sarbo, Monti, Golgi Cajal, Lenhossek, VanGehuchten and Berkley. The experimental work has been four kinds; the disruption of single nerve roots, noting the reaction in the cell-body as the result of the cutting off of the axones; the introduction of toxins into the body, as alcohol, lead, morphine, ricin etc., producing both acute and chronic intoxications; injection of cultures of virulent bacteria, producing an intoxication analagous to that supposed to exist in infectious diseases; and finally in cutting off the blood-supply. As the result of these methods of research, characteristic pathological lesions were produced in the nerve-cells of the cortex which seem to be analagous to those found in the human cortex in similar diseased conditions. Some workers even went so far as to say that they could produce lesions characteristic even of certain poisons, as for instance, of lead. During the period of 1896-99 many

reports of characteristic lesions were received, not only in the field of experimentation, but also in the pathology of different psychoses. More exhaustive study, however, including that of somatic conditions without mental disturbance, disclosed the fact that some of these characteristic lesions accompanied somatic diseases, such as pneumonia, typhoid, etc. This led in 1898 Nissl, who had been one of the foremost investigators, and later Hoch in 1899, to assert that one cannot lay stress upon the minor changes in the nerve-cells, such as, difference in staining of the Nissi bodies, their breaking down, etc., as many varied conditions present this same picture.

While a great deal of this work was therefore, of purely negative value, there are still some cell-changes which seem to be peculiar to some mental states. The greatest hope for pathological anatomy is still in the field of experimentation upon lower animals.

The physiology of the cortex of the brain has been of much less assistance than the pathological anatomy in widening our knowledge of mental disorders, because mental diseases depend upon disturbances of more extensive areas in the cortex than those outlined in physiology. Besides this our ideas of cerebral localization are in no way compatible, either in kind or extent, to those which we are compelled to maintain in regard to mental disturbances.

Psychology, on the other hand, has been of much value in aiding us to analyze the symptoms of mental diseases. Speculative psychology for years offered the greatest hindrance to the advance of thought in psychiatry, but the experimental psychology of the last decade has opened up a useful and promising field. It has already enabled us to recognize fundamental symptoms in some. Many of the most important contributions to this work have come from the psychological laboratory of Kraepelin at Heidelberg. There seems to be also in this field a

most promising future. The study of the mental effects of hunger and physical and mental overexertion, when carefully carried out will no doubt give us some insight into the mental state arising from exhaustion.

The three psychoses of most importance in recent psychiatric literature are, as already mentioned, dementia praecox, periodical insanity and melancholia of involution.

Dementia Praecox is a psychosis appearing mostly in early life, characterized by the development of mental deterioration. It begins gradually, usually with a period of depression, without clouding of consciousness, sooner or later developing delusions and hallucinations, at first accompanied by some emotional disturbance which later gives way to emotional stolidity and indifference. There may be more or less psychomotor unrest, especially in reaction to delusion. The delusions usually become progressively more absurd and may be extremely fantastic. Some cases present catatonic symptoms. Underlying these symptoms, which usually disappear in the course of two years, progressive deterioration is noted, especially in defective memory and judgment, and emotional indifference. The future course of the disease is one of advancing deterioration with occasional periods of exacerbation.

In periodical or manio-depressive insanity, the psychosis is characterized by the recurrence through life of attacks of mental disturbance of a maniacal or depressive form, sometimes of a mixture of both. The onset of these attacks is usually sudden and they vary in duration from a few months to two or four years, the first appearing more often before twenty-five years of age. In the maniacal attacks there is a pressure of activity, an increased rapidity in the association of ideas, producing what has been called a flight of ideas, more or less clouding of consciousness, some delusions, and a sparsity of hallucinations. The depressive attack is



characterized by a retardation or an inhibition of activity and thought. The patients, instead of being very active and loquacious, are inactive and reticent. There are delusions of a depressive nature and often hallucinations. This disease, in contrast to dementia praecox, is not accompanied by mental deterioration, unless the attacks become severe and frequent.

One of the best indications of the accuracy of our knowledge of disease processes is the certainty with which prognoses can be made. In psychiatry we have arrived at the stage of progress in which this is possible. Although we may not know the exact pathology of the different psychoses here enumerated, we are, however, sufficiently acquainted with their symptomatology, course and outcome to be able to give a prognosis with comparative certainty,

## A CASE OF MYELOGENOUS LEUKEMIA.

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AUGUSTIN A. CRANE, M.D.,

WATERBURY.

August twenty-first, 1899, I was called to attend Miss N. A., aged nineteen, previous health good, and family history excellent. I had occasionally prescribed for her for anemia and deficient menstruation, but on this occasion she had for the first time not gone to her work, that of telephone operator. Her malaise and prostration on this occasion were so great that I was led to look her over more thoroughly than before, and my first attempt at abdominal palpation revealed a hard mass filling the left upper quadrant of the abdominal cavity, with sharply defined edges. The general diagnosis of leukemia seemed so clear that I immediately gave a grave prognosis to the family, which was of course received with equally grave incredulity.

To fortify this view, I had Dr. J. R. Poore make an examination of the blood, and called Dr. Francis Bacon in consultation. These confirmations of the diagnosis left the family so completely satisfied that nothing in diagnosis, prognosis, nor treatment was again called in question.

In contradistinction to the usual gullibility and quackability of chronic patients, it is surprising to note that in the eighteen months of constant failing, in spite of messages from numerous irregulars that they had had many cases just like this and could surely cure her, they were never invited to do so; and notwithstanding the entreaties of the countless relatives and friends to try this or that sure cure or infallible doctor, this family never sought outside advice.

At the time spoken of, August, 1899, the liver was also greatly enlarged, perhaps doubled in size. The kidneys, heart, lungs, stomach and bowels, were performing their functions normally, except that the pulse rate was 90 to 96.

There was no cough, no pain, except moderate headaches, fair sleep and fair appetite. Skin was normal in moisture and color, no edema, dyspnea, nor epistaxis. There was an occasional slight afternoon rise of temperature.

Treatment as then instituted and carried with various symptomatic variations through most of the disease, was arsenic, with occasional strychnine, and occasional iron. The commercial glycerine extract of red-bone-marrow was never well borne by the stomach. At the suggestion of Dr. Bacon, sandwiches made from fresh marrow and seasoned to the taste were satisfactorily used with occasional remission, for months. The clinical picture as then shown, did not vary materially for months. By January first, 1900, the most noticeable change had been in decreased muscular strength and increased size of the liver and spleen, the latter resting on the left side of the pelvis, and in March, 1900, it rested squarely in the right ilium. Dyspnea and pain were even at this time remarkably un-prominent. Skin had then become dry and white, but with no petechiæ, eruptions nor pigmentation. In fact, these latter features never appeared. Menstruation had now stopped. Appetite was still fairly good, but capricious. Dyspepsia and dyspnea had become prominent but not uncontrollable features. Pain had become more of a factor; but for days and weeks at a time, the patient could dispense with opiates.

From April to August I was away, and had no expectation of seeing her alive again, but she was the first patient to send for me on my return. Had not failed materially, was cheerful and cheering. Emaciation was marked and abdomen so filled with spleen and liver as

to be larger than most women at full term. The thorax was encroached upon as far as the sixth rib on the left; but still the cardiac, pulmonary and intestinal functions were being carried on in surprisingly good shape, although the respective organs must have had less than half their normal space in which to functionate.

Not until autumn did there appear any edema, and then slight and confined to the feet and calves. There were at no time hemorrhages into the skin, nor from the mucous surfaces.

In December for the first time appeared albuminuria and diarrhea, the latter supervening upon an attempt to relieve extreme constipation, and remaining intractable to the end.

Pain had now become so constant as to require a grain or more of morphine per day, and dyspnea was at last as pronounced as would have been expected earlier from the great sub-diaphragmatic pressure. There was at no time considerable enlargement of cervical or other glands.

The girl died February eleventh, 1901, a year and a half after the disease had been diagnosed. The results of autopsy as well as pathological history of the case will be detailed by Dr. Poore.

The striking features of the case clinically were the toleration shown by the system to almost incredible pressure, distortion and displacement of nearly every organ in the body; the comparative freedom from pain and dyspnea until very late in the history of the case; the absence of hemorrhages, paresthesiæ, glandular enlargements and dysphagia; and the uniform, symmetrical, one-hoss-shay, progress of the malady which steadily, slowly and surely carried its work to the inevitable end, involving in due course every organ and every function of her body.

## A CASE OF MYELOGENOUS LEUKEMIA; ITS PATHOLOGY.

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J. K. POORE, M.D.,

WATERBURY.

The etiology of this disease up to the present time is unknown. Many causes have been ascribed by as many observers, such as bacterial invasion, malaria, syphilis, trauma, etc., but confirmation of any one specific cause is lacking. The finding of pyogenic organisms in organs post-mortem is in all probability secondary to changes occurring in them.

In the case in question there is a history of a fall while riding a bicycle, five years before death, in which one of the handle-bars bruised the left side in the region of the spleen and caused a soreness and lameness which persisted for some time.

As to the diagnosis of this disease there is but one way, and that microscopical examination of the stained blood.

Leukemia may be mistaken for malaria, syphilis, malignant or tuberculous disease, unless the blood be examined.

Hodgkins disease and leukemia are almost identical except for the blood. In no other disease do we find the blood as in the splenic-myelogenous form of leukemia. Its chief distinction is the large percentage of myelocytes.

Cabot says the blood in this disease is absolutely peculiar and characteristic and could not be confounded with that of any other disease. It is not my purpose to enter into any lengthy explanation of the different forms of white-corpuseles as the plates in Cabot's book will show them far better than I can describe them. As to the pathological changes occurring in the disease they

consist chiefly at first in an active hyperemia of certain organs—especially of the spleen which causes much enlargement. At first this enlargement is purely functional, but before long becomes structural from permanent increase of splenic pulp cells.

A similar process occurs in the liver and other organs of the body to a greater or less extent and adhesions due to subperitoneal inflammation are the rule.

On autopsy, body very much emaciated and the long bones were much smaller than usual. Abdominal tumor somewhat larger than that of a woman at full term and completely filling cavity.

On opening cavity all the abdominal organs were found matted together with dense fibrous bands and adhesions which could with difficulty be separated. The spleen extended to and lapped over the right iliac crest; on the left side the diaphragm was pushed up to the fourth intercostal space; on the right to the fifth.

Both lungs were adherent to pleurae and all the organs much congested. Liver weighed eight pounds thirteen ounces, and spleen eight pounds four ounces.

#### MICROSCOPIC EXAMINATION OF SPLEEN AND LIVER.

(1) Liver—Substance almost wholly replaced by enormous numbers of round and oval cells with granular protoplasm and somewhat vesicular nuclei, occupying the blood-capillaries. The liver cells have undergone extensive atrophy; only here and there in the section are any to be seen. The cells above referred to correspond with the cells of the bone-marrow; they are present in large numbers, admixed with red blood-corpuscles in the branches on the portal vein.

(2) Spleen—Section presents along one side a zone of necrosis, bordering upon which is a region of marked hemorrhagic exudation. Elsewhere the blood sinuses are distended with cells of the same sort as those present in the liver. Intermingled with them are numerous polynuclear leucocytes.

Diagnosis—Myelogenous Leukemia.

## TYPHOMALARIAL FEVER.

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E. K. ROOT, M.D.,

HARTFORD.

I have used the term typhomalarial fever both for brevity and because it best describes a familiar type of fever to all practitioners throughout New England. The term is derived from Surgeon J. J. Woodward of the United States Army, who in 1876, published in the transactions of the International Medical Congress at Philadelphia a paper describing that "Typhomalarial fever is not a specific or distinct type of disease, but the term may be conveniently applied to the combined forms of fever which result from the combined influence of the causes of malarious fevers and of typhoid fever." Since Dr. Woodward read his paper, the term typhomalarial fever has come into general use, and is now frequently given to irregular types of nearly any form of continued fever, and as a result has given rise to a confusion in the minds of practitioners, and in many instances to erroneous ideas of the actual nature and cause of the disease they were combating, and to erroneous treatment.

The discovery by the French Surgeon Laveran in 1880 of the malarial parasite, and the confirmation of his observations by observers throughout the world has now given us a ready method of positively differentiating diseases. As a result of this a study of many cases of typhoid fever and of so-called typhomalarial fever in many large hospitals, has led to the conclusion that the simultaneous infection by both specific poisons, namely by the malarial parasite and by the typhoid bacillus, is of very rare occurrence.

Osler reports in the bulletin of the Johns Hopkins

Hospital that out of three hundred and thirty-three cases of malaria, and three hundred and eighty-nine cases of typhoid fever treated in the wards, in no instance have the diseases been concurrent. Dr. Irving P. Lyon, formerly of Hartford, has contributed to the Johns Hopkins Bulletin a paper in which he collects from current medical literature twenty-nine cases only in which the diagnosis was positively made by the discovery of the malarial parasite in addition to a positive diagnosis of typhoid fever where the Eberth bacillus was also demonstrated. Dr. Lyon requires the following data to place such a case in the class of true typhomalarial fever: First, that this co-existence be shown by the discovery of the parasites of malarial diseases in the blood; and second, by conclusive evidence, clinical, pathological and bacteriological of true typhoid fever.

It is hardly necessary to observe that it is impossible to establish the existence of a malarial complication to a typhoid fever without actually demonstrating the presence of the malarial parasite in the blood. All of us who are familiar with the varied clinical aspect of typhoid fever, and have watched its varying symptomatology during various years are well aware that neither chills nor sweats, nor irregular temperature range, nor the apparent improvement of symptoms on the administration of quinine can be accepted as sufficient evidence of the existence of a malarial infection. Chills, irregular rises of temperature, and sweats, are by no means an uncommon symptom of an ordinary typhoid fever. In a study on chills in typhoid fever by Dr. Osler, published in the Johns Hopkins Bulletin, thirteen cases out of seventy-nine were reported to have begun the disease with the shaking chill; chills frequently follow the administration of antipyretics, such as antipyrine, or phenacetine. Chills follow the onset of complications, such as pneumonia, pleurisy, acute otitis, thrombosis, pyemic abscesses, perforation of the intestines, or an acute period-



titis; chills or chilly sensations and sweats are quite common during convalescence as we have all probably observed. Moreover, in this part of the State typhoid fever with little or no distention of the abdomen, no gurgling over the iliac fossa are rather the rule than the exception. It has become rather a habit of the profession to attribute unusual or irregular developments in the course of typhoid fever to malarial complication, but I am convinced from a considerable experience with the disease that these cases are very rare, and for the reason that I have only been able to satisfy myself and to make a positive diagnosis of coincident infection of malarial and typhoid fever in two cases I wish to report the two cases that I now present.

H. M., twenty-six years of age, was admitted to the Hartford Hospital November fourteenth. He had always been well until two weeks prior to his entrance when he began to feel tired and disinclined to exertion. A week before admission he had a chill followed by a fever and sweating, which was repeated a few days later. Since then he has had headache, backache, and inability to sleep at night. On entrance he was found to be somewhat delirious, tongue coated, abdomen slightly distended and tympanitic, spleen distinctly enlarged, heart, lungs, liver and kidneys normal, temperature on admission  $100^{\circ}$ . In the evening it rose to  $104\ 4\text{-}5^{\circ}$ , falling during the night to  $102\ 2\text{-}5^{\circ}$ , and rising the following night to  $105^{\circ}$ . There were abundant typical typhoid spots over the abdomen and chest. For the first week of his admission he ran a severe course of the disease, temperature rising to  $106^{\circ}$  in two instances, and with difficulty controlled by cold baths. On the eighth day of his admission, he had two slight hemorrhages, and on the thirteenth day three more hemorrhages, one quite profuse. On the night of the twenty-first day he had a sharp chill followed by a rise of temperature to  $106^{\circ}$ , and two days later another chill with a rise of tempera-

ture to  $105^{\circ}$ ; slight sweating followed both chills. There was no evidence of any complication such as pneumonia, pleurisy, periostitis, perforation, and the blood was examined and a plasmodium of malaria found shortly after the first chill. A second examination made following the second chill demonstrated active ameboid movement of the parasite within the blood-cell. Quinine was ordered, four grains every four hours, and later a grain of methaline blue three times a day. No further chills followed, and the temperature ran a more moderate course. The character of the delirium and the general appearance of the patient altered perceptibly, and became more typical typhoid. In the fourth week of the disease, marked toxic symptoms developed; rigidity and stiffness of the extensor muscles, the temperature gradually rose, and refused to yield to baths, and the patient died from exhaustion on the twenty-ninth day.

The second case, C. A. E., was admitted to the hospital November twenty-eighth with a history of chill, fever and sweats during the preceding week, succeeded by rapidly increasing weakness until his admission. His temperature was  $104^{\circ}$  on admission. He had well marked rose spots over the abdomen, considerable tympanitis, and slight delirium at night. Urine showed a trace of albumen. For the first week, his fever ran a typical typhoid course, its maximum being  $104^{\circ}$ , and yielding readily to cold baths. He had a slight chill on the tenth day followed by a temperature of  $101\frac{1}{2}^{\circ}$ , but which yielded promptly to a cold pack, and was followed by no unpleasant symptoms. On the eighteenth day he had a sharp chill followed by a temperature of  $105\frac{1}{2}^{\circ}$ , and sweats. An examination of the blood showed abundant malarial parasites in the corpuscles. Large doses of quinine were promptly vomited, but two grains every two hours, and a grain of methaline blue three times a day controlled the paroxysms, and the case progressed favorably. He had a slight hemorrhage on the twentieth

day, losing only a few spoonful of blood. On the twenty-first day of the disease the temperature was normal and remained so for two weeks when he had a sharp chill followed by a rise of temperature to  $105^{\circ}$  followed by a sweat and remission of temperature to normal, and a second chill on the twenty-third day, temperature rising to  $103^{\circ}$ , and again followed by a sweat. Plasmodium was again demonstrated in the blood; four grains of quinine every four hours and a grain of methaline blue given for a week when no further complications appeared. This patient made a good recovery. The convalescence was delayed by the development of phlebitis of the external saphenous vein.

These cases present no unusual feature except that we were able to demonstrate positively the presence of the malarial parasite in both, and in both the diagnosis of typhoid fever was based upon the temperature range, spots, typical delirium, the hemorrhage from the bowels, and the Widal reaction. P>

# THE RELATION OF HEADACHES AND EYE- STRAIN.

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H. W. RING, M.D.,

NEW HAVEN.

If I am asked What are the natural functions of the human eye? What its uses? And what its abnormal conditions? I would state that according to the conditions of civilization we require much more work of the eyes at the present time than heretofore, for, in this struggle of the "survival of the fittest," man must always use the visual power in the library, the office, and the workshop, during which time he must constantly strain his vision at the near point. This naturally calls for the innervation of two very important functions of the eye, in order to obtain perfect binocular vision, the stimulation of the ciliary muscle to focus the divergent rays on the macula, and the stimulation of the internal recti and the other guiding muscles of the eye to direct the visual lines of each eye on the object.

This is the natural function of the eyes and for this purpose we require a perfectly normal eye and a perfectly normal balance of the straight muscles of the eye.

Do we ever find this perfect eye? Occasionally but not often at the present time, considered from the point of view as an optical instrument, mathematically precise.

What then are the uses of the eye? To see clearly at different distances while the eye is at rest and adjusted for parallel rays, and then under the stimulation of convergence and accommodation to have the ability to see clearly and distinctly at the near point as in reading and working.

Now, what are the abnormal conditions of the eyes? Unfortunately Nature is not so liberal in her gifts to all the human race, and to some she will fail in the visual power so that the vision is less than  $\frac{20}{XX}$ , due to the refractive condition of the eye, either with or without astigmatism; to others she will fail in the balance of power of the straight muscles, as, for example, their power may be relatively too high or too low; while in others we may find that she has failed in both conditions. Hence in any of these different failures from the normal we may have various reflex, as well as direct, symptoms, and in discussing the subject of ocular headaches the reflex cannot always be eliminated.

Let us consider in order the common abnormalities of the eye, their symptoms and treatment and in this way the various kinds of ocular headaches will be brought to our attention in their relation to their various causes.

(1). Hyperopia, which is due to an antero-posterior shortening of the eye-ball in the majority of cases, the low index of refraction of the crystalline lens being too rare to notice.

The hyperopic eye is adjusted for convergent rays, and these are not encountered in nature. Without accommodation it sees indistinctly at all distances. By the exertion of accommodation it sees clearly, but only by the exertion of accommodation exceeding (by the amount of its hyperopia) that required of the emmetropic or normal eye; and having to use some accommodation constantly it is deprived of the periods of rest which come to the emmetropic eye when fixed on distant objects. The greater amount of accommodation required of it causes the hyperopic eye to suffer earlier from the diminution of accommodation by age, and afterwards the further loss of accommodation deprives it of distinct distant vision. Probably about thirty per cent. of the patients who wear glasses have simple hyperopia, and from this cause we have liability to eye-strain and indistinctness

of vision, either of which may become an indication for correction of the defect by convex lenses.

At birth nearly all eyes are hyperopic. It is thought, but not proven, that during the first years of life there is some general tendency for hyperopia to diminish. On the other hand from early life to old age there is a general tendency for hyperopia to slowly increase, due to the gradual increase in size of the crystalline lens.

When the power of accommodation is good, as in the young, and the hyperopia not too large, the total hyperopia may be corrected by the accommodation so that there is distinct vision at a distance. In the higher degrees of hyperopia distinct vision is possible for distance only when excessive convergence is made at the same time, i.e., when there is an inward squint, and in this fact is contained the reason why convergent strabismus most frequently occurs in consequence of hyperopia.

The range of accommodation of a hypermetrope is no greater than that of an emmetrope, who needs to use the ciliary muscle in near work only, but the hypermetrope has to use his accommodation for distance as well as near so that the eye has no period of rest but is bearing a constant and excessive burden. He is always dragging about with him a "deficit" in the accommodation (i.e., the quota of the latter needed to correct his hyperopia)—a deficit which causes him to become quickly exhausted when doing near work. At first, vision near by is distinct and the work goes on well; but after a little while the object, print, near work, etc., begin to grow indistinct and are blurred as though enveloped in a slight haze. This is because the overstrained accommodation gives way and the eye ceases to be properly focussed.

After a period of rest the work may be renewed, but the same obscurtion sets in again and compels another pause. These periods of enforced rest are the more frequently repeated the longer the work is continued, and associated with the blurred vision is pain in the eyes and

headaches particularly in the frontal region. These unpleasant symptoms will often cease when the near work is stopped and the eyes look away in the distance, but in the higher grades of hyperopia little or no close work is possible and even distant vision is painful. This is also often true in the low grades where, for various reasons, the system is below par or a neurotic condition exists. The theater is responsible for many headaches among the hyperopes and in my experience with patients is one of the most trying ordeals with which they have to contend. Although their fixation is for distance, the dazzling from the glare of lights and constantly changing movements of the actors seem to produce pain and distress in the eyes with smarting and burning and a general headache or pain in the frontal region. These church, concert or theater headaches are largely due to efforts made by abnormal eyes to stare at distant objects, while their cerebral centers are meantime being further irritated by rebreathed air and unshaded lights.

Under the influence of school work lower grades of hyperopia begin to cause eye-strain. This often shows itself in local congestion and inflammation of the conjunctiva and lids, styes, photophobia and frequent winking on account of the conjunctival inflammation. In later childhood begins the liability to headache. Very young children do not commonly complain of headache. During school life even the lower grades of hyperopia are liable to cause eye-strain, but, afterwards, most eyes being used to better advantage and not being so severely taxed, the low degrees of defect are less likely to cause trouble, although headaches established during childhood may be continued, and periods of poor health may cause the development of eye-strain. Any debilitating illness and especially La Grippe brings out prominently symptoms of ocular abnormalities that were never before present because there had previously been sufficient

mental and bodily vigor to spare to carry a moderately additional burden.

Treatment: The general rule should be to give as near the full correction as the patient will accept with comfort. The older the patient, the stronger the lens accepted because the accommodation is diminished. Young people with good distant vision and only moderate hyperopia, do not easily get used to wearing correcting lenses for distance, although accepting them with great comfort for study, because the vision may not be quite so distinct, and it is not always wise to force their acceptance unless their asthenopia is only partially relieved by using glasses for close work only. It is a mistake to make any hard and fast rules as to the use of glasses except in certain instances. Nearly every case is a law unto itself and the comfort of the patient is the most important consideration. Some indications as to the constancy with which glasses should be worn may be drawn from the symptoms: Headaches, particularly if continuous or not associated apparently with use of the eyes, is very much more likely to be relieved when the lenses are worn constantly. The same is true of chronic conjunctivitis or marginal blepharitis and of inflammatory changes within the eyes.

In cases of convergent strabismus the constant wearing of full correction is always to be tried and as early in life as the child can be induced to wear them, which is usually in the sixth or seventh year, and if this is done and associated in some cases with special exercises for the squinting eye, binocular vision may often be retained, parallelism result and a subsequent tenotomy avoided. Apart from the wearing of correcting lenses, there is no treatment for hyperopia; but the symptoms that arise from it may be relieved by diminished use of the eyes, especially for near work, or by improvement of general health, and by influences and remedies that bring it about.



(2). Myopia may occur as the result of a congenital tendency to the formation of too long an eye-ball but the mass of myopic eyes are now generally regarded as pathological. They show distinct, and often very grave, lesions of the ocular tissues, to which the myopia may be secondary, but which it tends to aggravate.

Prolonged near work favors the occurrence and increase of myopia and its tendency is progressive and in some cases goes so far that convergence becomes too difficult to sustain, when the more defective eye is permitted to deviate, and divergent strabismus, either intermittent or constant is established.

It is well to know the different degrees of myopia. Low myopia may be considered less than 2.5 dioptries, when some accommodation is habitually employed for near work. Moderate myopia is from 2.5 D. to 5.0 D. when near work can be done without accommodation. High myopia ranges from 5. D. to 10. D., in which work is best done at the far point of distinct vision. Very high myopia is above 10 D. and is usually accompanied by great alteration in the shape of the eye-ball and changes in its coats.

Our chief interest in myopia is its possible factor in causing ocular headaches and the subject may be briefly dismissed as simple myopia rarely, or at least, not commonly, causes headaches unless in the very high degrees where there are serious intra-ocular changes. A mildly myopic eye is a strong eye and capable of much hard work and the most difficult problem for the oculist is to induce the myope to do less close work and keep out-of-doors, adopt a better general hygiene, and thus prevent the tendency to increased elongation of the globe with its dreaded pathological possibilities.

Prescribing the proper glasses for near-sighted persons requires much experience and a careful consideration of all the attendant conditions. In no case should the choice

of glasses be left to the optician. In other cases they make mistakes. In this case they make tragedies.

(3). Astigmatism is an irregularity in the curvature of the cornea. It is a defect in which rays from a single point do not after refraction tend to meet at a single point.

The average eye has a small degree of astigmatism and in some cases there is also an inequality of the curvature of the crystalline lens.

About forty per cent. of metropic eyes have astigmatism with hyperopia and about nine per cent. astigmatism with myopia. About six per cent. have simple hyperopic astigmatism and about two per cent. simple myopic astigmatism. The cause in the great majority of cases is a congenital irregularity of the curvature of the cornea.

Symptoms: Generally lines can be seen distinctly only when they run in some one direction and this occasions a certain indistinctness of vision so that when tested by the test-letters, some of these on account of the direction of their characteristic lines are more blurred than others, and visual acuity is reduced in accordance with the degree of astigmatism. In childhood the difficulty of the imperfect images hinders the development of the powers of visual perception, and even of the general mental processes. The indistinctness of vision may be partly overcome by rapid changes from one state of accommodation to another, but this severe strain on the ciliary muscle leads to eye-strain with all its possible manifestations—pain, congestion or inflammation of the eyes and its appendages, headache and other manifestations of disturbance of the general nervous system.

As one advances in life and the patient learns to use his eyes, indistinctness of vision may be overcome, but increases when age has caused the impairment or complete loss of accommodation and thus the presbyope may

never find satisfactory glasses unless an astigmatic lens is combined with the lens suitable for his age.

Astigmatics complain of confusion, but seem to be unable to describe exactly how objects appear. But they very often complain of headaches, and have a lack of quick perception. The degree and kind of subjective symptoms will depend much upon the peculiarity of the person and if the temperament be nervous or excitable the reflex and attendant phenomena are sometimes quite extraordinary.

The ciliary muscle is very much strained and if the astigmatism is associated with hyperopia, as is so common, a double load is put upon it, which naturally causes not only pain in the eyes but in the supra-orbital region as well and reflex pain in this region is one of the most common locations for ciliary strain. If we follow the path of the nervous influence in this case it will not be difficult to understand why headaches should result. The ciliary muscle becomes exhausted with its efforts and through its sympathetic fibers or directly, irritates the third nerve nucleus which supplies it with its impulse to perform its functions. Close by the oculomotor nucleus lies the nucleus of the great sensory nerve of the face, the trigeminals. This in its turn becomes irritated and its final terminations on the forehead suffer. It is not improbable that along with the severer peripheral aching there goes a duller and deeper pain, probably situated in the cerebral centers as well as in the sympathetic fibers supplied to the dura mater.

Astigmatism is the most frequent cause of headaches from eye-strain, and as the asthenopic symptoms follow so regularly use of the eyes, the sufferer attributes it at once to some trouble with the eyes. If a lady complains that headaches are brought on by shopping excursions, one may be very suspicious of astigmatism or disturbance of the ocular muscles, or some other ocular error.

The necessity for keeping a lookout in all directions to

avoid collisions with people in a crowded store, pedestrians on the pavements and horses and vehicles on the street crossings, the close examination of fabrics, often in a poor light—all these efforts make large demands not only on the general nervous energy but particularly on the extrinsic and intrinsic muscles of the eye. When these are handicapped by muscular anomalies and refractive errors, the shopper usually goes home with an exhausting headache.

The treatment for astigmatism is to wear a lens made from a cylindrical glass which will correct the meridian of irregular refraction and while all glasses (and by this word I mean to include the frame as well as the lenses) should be carefully and accurately fitted by an expert, in the case of the astigmatic lens it is absolutely essential for successful results that it should be well centered and kept parallel with the eyes, neither drooping nor tilting up. In addition to correcting lenses it is necessary to remove, so far as possible, all sources of nervous irritation. The eye may need a mild astringent wash and much relief is often found by the use of very hot or very cold fomentations, the choice being left to the sensations of the patient.

(4.) Muscular anomalies. Heterophoria is the name now commonly given to weakness of the extrinsic muscles of the eyes. As you know the eye is held in position in the orbit by six muscles and free movement is possible by the action of these muscles and in order to obtain binocular single vision, their normal adjustment is so delicate and perfect that rays of light from an object must be focussed on identical points on each retina.

It is a remarkably fine bit of mechanism and it will not be difficult to understand the results that might follow when it is out of adjustment. The interni have the greater burden to carry as they are brought into use so prominently in converging for any near work, and while

a moderately weak internus might stand the ordinary strain necessary to keep up its share of the work for distant vision when the eye is in a state of rest, the extra demand made for converging for close work, while its stronger opposing, fellow muscle, the external rectus, is trying to pull it out, is like a tug-of-war with extra strength and weight on the other end of the rope. The patient complains of inability to continue near work because there is soon felt a drawn, strained, tired sensation in the eyes, blurred vision and even diplopia. Here sensory disturbances are in the occiput, back of the neck, and sometimes in the back. These disturbances may take the form of acute or dull pain, a heavy pressure feeling and general sense of confusion. If the muscular weakness is extreme, double vision results and perhaps actual divergent squint.

This divergent deviation is due to a weakness of one or both interni or over-action of one or both externi or to both these causes combined, and may be structural, insertional or innervational. As to treatment for weakness of the interni, after all errors of refraction are most carefully and thoroughly corrected, prisms may be added to the lenses in case the insufficiency is not of too high a degree and these act as crutches in assisting the tired muscles and are sometimes successful. Tonics, attention to any possible systemic weakness or defect, the best hygiene and much out-of-door life are more essential aids than in any other form of eye-defect, and it is often necessary to send patients away for a complete rest from work and live an out-of-door life for six months or a year. As a last resort a tenotomy, graded according to the degree of error, is done on the overacting externi. My experience has been that among students of both sexes during the years of most rapid growth, the interni are very likely to weaken. They cannot seem to "keep up with the procession" and these exophorias so-called (meaning a tendency of the visual lines inward) are the

most difficult problem that the oculist has to fathom among the muscular errors.

Exophoria (a tending of the visual lines outward), is a weakness of the externi, which may vary from a mild tendency of the eyes to turn in to an actual squint. This condition is more likely to be found in hyperopia, which inclines to weakness of the abducting power of the eye. In addition to refractive errors other operative causes are, depreciation of general health by chronic or acute disease, growths or injuries or congenital disorders.

Overtaxation of the eyes is the important factor and may be brought about by reading on railway trains, by reading when lying down, which is a particular strain on the muscles; by attempting difficult close work; by the study of languages whose text is intricate, such as Greek, German and Hebrew. All forms of uterine disease, fevers, and chronic anemia favor this muscular weakness.

In addition to the usual symptoms of asthenopia, like pain and distress in the eyes for any fixation, unsteadiness of letters, dread of light, smarting and burning sensation in the lids and blepharitis, there is very likely to be vertigo, diplopia and confusion of vision, and frontal, occipital and temporal headaches, and some claim even chorea, epilepsy, intestinal disturbances and when the patient is feeble in general health or neurotic we do sometimes get the most erratic and remote symptoms.

Treatment: Systematic exercise with prisms will certainly strengthen weak externi in very many cases and unless the insufficiency is very great I generally try this treatment after a most careful correction of refractive errors, and with tonics, rest and as much out-of-door life as possible, I cure many of these cases. Again partial tenotomy as a last resort may succeed in many cases and fail in others.

We sometimes have to use prisms or do tenotomies for

weakness of the vertical muscles but they are not so commonly affected.

The period of surgical activity with the ocular muscles has passed and in these days the average conscientious, well-informed ophthalmologist reserves muscle-nipping as a dernier ressort and appreciates the fact that weakened ocular muscles is simply one of the many expressions of a weakened system and depends more and more for an improvement by a specific or general building up of lost energy.

Headache will naturally be associated with many of the diseased conditions of the eye especially if some of the intra-ocular contents are involved and I will briefly refer to a few ocular disorders where pain is not confined to the eye.

Between the iris lies the ciliary body five to seven millimetres broad, furnishing a bond of union between most of the membranes of the eye, and this body is composed of two portions having distinct functions. One of these is the vascular and pigmented part, and the other is the muscular part known as the ciliary muscle. The nerves are from the ciliary, and after passing between the choroid and sclera, form an intimate mesh-work in which are found many multipolar ganglion cells and we, therefore, have here a local nerve center, or ganglion. From this plexus fine fibres proceed to the iris, to the ciliary muscle, and to the cornea. They include sensitive, motor and sympathetic filaments. Hence it may be readily understood that when any part of the ciliary body or the parts closely contiguous are involved in an inflammation, pain need not necessarily be confined to the eye, and as some constitutional condition is commonly responsible for disorders in this region of the eye relief is not likely to be complete by local treatment only. As rheumatism is one of the most common causes of eye troubles and syphilis another, constitutional remedies for these diseases are generally indicated.

Pain from the outset is a conspicuous feature of iritis. Situated first in the globe, it radiates along the branches of the fifth nerve, chiefly the supra-orbital and malar. It spreads sometimes to the side of the nose and inner side of the orbit, but the usual headache is in the forehead, top of the head and temple, and worse towards night.

The pains of iritis are similar to those of cyclitis and in any inflammation of the ciliary body the iris and choroid are more or less involved.

Inflammations of the optic nerve and retina are so frequently due to systemic causes that one could hardly consider these diseases as producing strictly ocular symptoms.

Pain is a very common symptom of glaucoma and there is generally a neuralgia of the fifth nerve and headaches are sometimes very severe.

It is not always possible for any practitioner to differentiate between headache of extra-ocular origin and those wholly or partially due to eye-strain, but it is the duty of every medical man to instruct himself in the natural history of all forms of headache.

The proportion of the ocular element in various kinds of headache is large, probably thirty per cent. to forty per cent. of the mixed cases and seventy-five per cent. of all frontal headaches. The degree of frequency of ocular headaches would come in this order: (1), supra-orbital; (2), deep orbital; (3), fronto-occipital, and (4), temporal.

The character of the pain is not peculiar, but what would be commonly called neuralgic. In the supra-orbital form it is very generally accompanied by pains in the eyes.

Of the headaches that simulate ocular headaches the most common and difficult for the general practitioner to differentiate is the supra-orbital and supra-nasal pain of nasal disease.



The chronic frontal headache of nasal disease is not much associated with use of the eyes and is likely to continue when the patient retires for the night.

Supra-orbital pain of malarial origin may be detected by its periodicity and by its generally being unilateral.

There is a class of neurotic people who have nervous headaches which resemble the headaches of eye-strain, but are perhaps more fugacious; but the ocular pains seem to be mere incidents of their general condition.

Insomnia and dyspepsia are two of the most common causes of ocular headaches and female subjects with pelvic disturbances are famous for their reflex head pains.

The oculist is not infallible, but in these days of strenuous existence he has multiplied in numbers and activity and made comfortable and happy eighty per cent. of those wretched invalids who twenty-five years ago wandered about from "pillar to post" seeking relief from chronic headaches and rarely finding it.

## REMARKS ON ADENOIDS.

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In presenting the subject of Adenoids, the history and pathology of which make the treatment so plain and imperative, my only apology rests on the undisputed fact that this disease frequently goes unrecognized and equally as often without receiving the appropriate treatment. Considering the milder cases; for instance in a child three or four years old, before serious complications have arisen, the train of symptoms following obstruction to the posterior nares, mouth-breathing, snoring, night terrors and the ill effects of air inhaled directly through the mouth, render the case one for serious consideration. When, however, marked complications supervene then prompt action becomes still more imperative.

The limits of this paper will allow only a brief consideration of some of the practical features of Adenoids with the recital of a few cases by way of illustration.

The disease is variously known as Adenoids, Adenoid Vegetation of the Pharynx, Hypertrophy of Luschka's Tonsil, Lymphoid hypertrophy, and Enlargement of the third tonsil.

The upper and posterior wall of the naso-pharynx is normally the seat of lymphoid nodules. This tissue is composed of masses of round cells held together by a small amount of connective tissue. Hypertrophy of these nodules is the source of Adenoids. Extension of the hypertrophic process into the eustachian tubes causes obstruction to these tubes, tinnitus aurium, and deafness, according to Deaver. Adenoid hypertrophy is usually accompanied by hypertrophy of the faucial tonsils, whose

structure is very like the former except the cellular element is less and the amount of connective tissue much greater. Recent research by different investigators has shown that these structures when abnormal afford a fertile field for the growth of bacteria, infection through these channels frequently producing swelling of the lymph nodes of the neck.

The attention of the medical profession was first called to adenoid vegetations by Meyer, who found them present in one per cent. of the children examined in Copenhagen. Chappel found sixty cases out of two thousand children examined--three per cent. Later observers have found them present in much larger percentages, even as high as twenty-five per cent. being reported. It is most frequent between the ages of five to ten years, occasionally in infants and also in adults. It has been observed to frequently follow the infectious diseases, and, according to Osler, children with adenoids are more liable to have diphtheria. A suspicion of the disease is usually aroused upon first sight of the patient and a provisional diagnosis made from the child's appearance and symptoms; but a positive diagnosis by passing the index finger into the posterior nares and palpating the masses of hypertrophied tissue, which is invariably accompanied by a slight hemorrhage. The normal mucous membrane will not bleed. Fibrous tumors and polypi should be differentiated.

The dangers from adenoids, if neglected in childhood, are far reaching, not from the growth alone, but from the associated conditions and complications, some of which are the characteristic idiotic facial expression with open mouth, the altered contour of the chest commonly known as pigeon-breast, deafness present to a greater or less degree in the large majority of cases from eighty to ninety per cent, according to different authorities, post-nasal catarrh present in nearly all cases and which frequently does not disappear as some suppose with the

changes at puberty but persists in adult life—an inheritance of neglect during childhood.

Among other complications observed are certain reflex phenomena, i.e., spasmodic croup, asthma, enuresis, hysteria and convulsions.

The following cases will illustrate certain types of the disease:

Case I.—A boy six years old whom I had attended for several months in three convulsions, which he had had for about three years. The child was found to be a month-breather, snoring at night, subject in the fall and winter to tonsillitis and colds in the head. There was a prominent neurotic family history. Several examinations of the throat revealed hypertrophied tonsils and prominent adenoids. Operation advised. Before the parents' consent was obtained the child had two more convulsions. Treatment during this period consisted of general tonics and the occasional use of bromide and chloral without permanent beneficial results. Tonsillectomy and adenectomy were followed by the usual benefits to general health. Iron tonics and cod liver oil were given for some months afterward. A period of about four years has now elapsed since the operation and the child has had only one convulsion, mild in character, which occurred three years ago.

Case II.—About five years ago the following case was referred to me; a boy nine years old with extensively hypertrophied tonsils and adenoids, filling the upper portion of the vault of the pharynx and extending into the nasal chambers. I hesitated about operating at once on account of the ulcerated condition of the tonsils; but finding this did not improve under treatment the operation was performed. This case had all the prominent symptoms, including a marked deafness and loss of the sense of smell. In fact his teacher at school had sent word home that the boy was stupid. The results of the operation were the immediate restoration of the sense

of hearing and the sense of smell. When the child came out from the anesthesia he remarked to his mother how plainly he could hear the clock tick in an adjoining room, and upon seeing some carnations he remarked how sweetly they smelled.

Now this last case is one of the extreme types of the disease which is invariably operated upon; in fact there is no other alternative; but it represents only a small per cent. of the cases demanding operation. It is that large proportion of milder cases in which we are especially interested where the child at times is not markedly inconvenienced, but occasionally upon a careful examination we find mouth-breathing with its ill effects on both throat and lungs, attacks of tonsillitis, slight deafness, increasing little by little, and impaired general nutrition, which invalids the child in a measure and does not give him an equal chance with other children who are in the possession of good health.

The two following cases illustrate common types of the disease.

Case III.—About two years ago a girl fourteen years old was referred to me who had suffered with adenoids since early childhood. Her prominent symptom was deafness, which dated back to childhood, but which had increased in severity during the last four years. Only a moderate amount of lymphoid tissue was found, but especially prominent about the eustachian orifice on the side of most marked deafness. Adenectomy and tonsillectomy was done under ether anesthesia. Improvement in breathing immediately followed and general improvement gradually, but only very slight improvement in hearing. At the present time, about two years afterward, at the age of sixteen, in spite of special ear treatment, her deafness is little if any improved.

Case IV.—About eight months ago a boy five years old with adenoids was referred to me. The parents had noticed slight deafness (did not pay attention to ordinary

conversation) for about one year. Examination showed a marked hypertrophy of both tonsils with bad adenoids. Adenectomy and tonsillotomy was followed by complete recovery. At the present time the child's hearing is normal.

Now the brief history of this last case is illustrative of the most favorable time for treatment, while the previous case (the girl of fourteen) illustrates the most unfavorable time to operate, because a pathological process has developed and extended to the middle ear, producing permanent disability.

Case III (the girl of fourteen) represents what in all probability Case IV (the boy of five) would have been had he been allowed without treatment to go on to puberty; while Case III (the girl of fourteen) if detected and operated upon at the same early period would in all probability have been followed by complete recovery with restored hearing instead of permanent deafness.

There certainly is only one satisfactory treatment for adenoids and that is thorough removal. While I do not absolutely follow the dictum of Bosworth to operate in all cases, still the larger proportion require it. Each case must be considered by itself.

In general, operation is indicated in cases where the growth forms an obstruction sufficient to produce habitual mouth-breathing with snoring at night, and is doubly indicated when accompanied, first, by involvement of the eustachian orifices with deafness—even very slight; second, when accompanied by reflex neuroses; third, when in addition there is a tubercular family history; fourth, also for sanitary reasons to get rid of large lymphoidal masses—an obstruction to proper drainage of the naso-pharynx and a fruitful seat for bacterial invasion.

What are the dangers from the operation? In general it can be said to be a safe operation. Practically

the only dangers are from the anesthetic and from hemorrhage. Danger from the anesthesia is not so great as in the majority of operations since profound anesthesia is not required. Chloroform is regarded the more dangerous anesthetic. Some operators, however, report using it exclusively with good results. Ether certainly is safer.

The dangers from hemorrhage in young children who are not subjects of hæmophilia are practically nil. There is more danger at puberty.

What can you promise as a result of the operation? If done early, immediate and permanent relief of symptoms and gradual improvement in general health will follow. It will not recur, if done thoroughly, in over ninety per cent. of the cases according to Coakley.

What will be the result if no operation is performed? If the child has symptoms and complications sufficient to demand operation certainly benefit will not come from delay. Early surgery is the best since no other treatment is of avail. The train of ill effects increases year by year and the changes at puberty cannot remedy them. The danger has already been done. The natural fear of an operation should be overcome, and parents be persuaded to believe that what is most desirable is to do the very best thing for the child. In such cases Ingals advises to suggest to parents that general treatment be instituted for two months with the promise that if there is no cure they will promptly consent to the more radical treatment.

The operation I will not describe in detail. My own preference is for a general anesthetic, because a more thorough operation can be performed with less shock to the patient. Ether is preferred. My practice is to allow the child's head to drop over the end of the table supported by an assistant, which keeps the blood effectually out of the trachea and stomach. The hemorrhage invariably stops spontaneously, the blood escaping through the nose

and mouth. Irrigation of the nose after operation is not practiced unless there is evidence of infection. Otitis media has not yet followed as a complication. The only instruments required are Lowenburg's forceps, modified Goltstein curette, Denhardt's mouth-gag and Mathier's tonsillotome. Afterward, general tonics, iron, cod liver oil and strychnia are given. The habit of mouth-breathing also requires attention. The parents are advised to remind the child to keep the mouth closed and at night if the habit persists the jaw is closed by a handkerchief tied under the chin or by straps which some use. The habit is invariably overcome in time.

The inquiry may be made as to who are capable of performing this operation? Certainly the early view that all that was required was to enrette the mass off with the finger nail has passed. Incomplete operations have been largely responsible for the prejudice against having these cases properly attended to. Only a thorough removal of the growth with proper instruments will prevent its recurrence. To accomplish this perfect familiarity with the parts and certain technical skill are required. An aseptic technique should be maintained as far as possible. Only the general surgeon, and throat specialist, in my opinion, are prepared to do this work.

In closing, my plea is for the early recognition of adenoids by the physician and for the prompt application of the only appropriate treatment.

Dr. W. T. Bacon in discussing the subject said he would like to emphasize one or two things. One was the large number of children which were allowed to grow up with adenoids. Physicians do not appreciate the position. The constantly recurring winter coughs, so difficult to control, are relieved by removing the adenoids which cause them.



## MENTAL AND PHYSICAL CULTURE IN OUR HIGHER SCHOOLS.

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It is a conviction of a great many physicians that the pupils in our higher schools are overburdened with mental work. In the lower schools mental overwork is rare because of the dominance of the play impulse, though cases of mental breakdown or deterioration in precocious children are not unknown. But at the high school age, the ambition to succeed and the sensitiveness to failure are keenly developed. Hence the possibility of the occurrence of mental strain is unquestionable.

This belief of physicians rests undoubtedly upon personal experience. They are called upon not infrequently to treat the direct results of the overburdening of the brain in school in various forms of nervous disease. They are often consulted regarding the continuance at school of delicate children. They are compelled to take note of the constantly advancing standard of requirements, and the multiplicity of new lines of work introduced. One has only to open any of our text-books on nervous and mental authorities upon this subject. I quote Derecum of America, Clouston of England, and Oppenheim of Germany, as leaders of expert opinion who regard school-overburdening as an important cause of the great number of neurasthenic men and women to be found in all civilized communities to-day. Oppenheim says: "Preparation for examinations and school-overburdening often evokes neurasthenia." Derecum says: "Children upon whom is laid a too close application to study,

or whose education provides simply desk instruction to the exclusion of physical exercise, are likely to develop into neurasthenic men and women." Clouston says: "If the education of civilized young women should become what some educationalists would wish it to be, all the brain energy would be used up in cramming a knowledge of the sciences and there would be none left for trophic or reproductive purposes." An authority to whom the world always gives heed, Mr. Herbert Spencer, says: "When we examine the merciless school-drill to which many school-children are subjected the wonder is—not that it does great injury but that it is borne at all."

But we are not confined to the testimony and belief of physicians as to the direct effect of the school regimen upon the nervous system. The subject of school fatigue has recently been made an object of scientific investigation by a number of medical experts in Germany. The best results were obtained by Griesbach's method of testing the skin sensibility with the esthesiometer. The test consists in ascertaining the cutaneous reactions at different intervals during the day. Dr. Lukens reporting this work in the "Educational Review" states that it was shown that frequently children were not able in the balance of the twenty-four hours to recover from the brain fatigue endured during school hours. The midday recess was by no means sufficient for recovery from the fatigue of the morning session. Whereas during holidays the skin sensibility was fully as great or greater in the afternoon than in the morning during school days, there was a constant loss. Here we have direct experimental evidence of a high character as to the fact of the undue consumption of brain energy under normal school conditions. The continued spending of more nervous energy per day than the system supplies must end in bankruptcy of the nervous forces, which is neurasthenia. If it does not reach that degree, it may yet predispose to many forms of physical and mental debility

developed in later life. Dr. Lukens remarks: "We must remember that the hundreds of thousands in our insane asylums were school children once. How many came out of school weaker than when they entered? We need not lay upon weaklings burdens too heavy for them to bear."

We have every reason to believe that the school-children of America are worked quite as hard as those of Germany or any other country. Our high school scholars spend seven or eight hours per day in mental effort of an exacting character. Some perhaps spend less time than this but not a few spend a great deal more. The parents generally testify that their children do little else afternoon or evening but prepare for the next day's recitations. As has been pointed out, this mental labor is far more severe than the mental work of business or professional people inasmuch as the subject-matter is ever new and unfamiliar, requiring an unflagging attention. It is not routine work. Never perhaps in after life is such a continuous rate of advance in intellectual lines called for by the most exacting profession. The apportionment to each lesson is so large or so difficult that but one or two in a hundred can attain to the standard of perfection. There is good reason to believe that the list of those who so attained in high school and college would show a disproportionately large number of names subsequently registered in asylums and sanitariums.

Whereas a generation ago, men were graduated from college frequently at sixteen years of age, the standard of requirements has been pushed up so far that men are not now graduated from the high school before eighteen, from college before twenty-two, from the medical school at twenty-six, and if they spend two years in the hospital, as is desirable, they are twenty-eight or more before entering upon the waiting career of a physician. (Any one who has been through these courses of study can testify that the successful accomplishment of them requires in-

cessant application.) Such a standard of requirement is more than a mistake. It is a wrong to the individual, to society and to the State.

It is apparently difficult for teachers or parents to give any credence to this opinion of physicians. The reason is not far to seek. The evidences of mental strain do not show themselves at once and might require expert examination to be detected. The scholars are in the flush and vigor of youth, ambitious, enthusiastic, optimistic. They pass from the view of the teacher before any evil results are manifest. It is not supposed that actual break-down occurs very frequently. The evil results are those of deprivation, and predisposition.

The educationalists have apparently no adequate appreciation of the physiological requirements of the organism at puberty. This epoch, corresponding with the high school age from thirteen to eighteen, is the great developmental epoch in the life of the organism. The rate of growth in the body in all directions is greatly increased, sometimes doubled. The evolution of new physiological functions goes on rapidly. The mental changes are even greater and swifter. Especially in girls, who pass as it were with a bound from childhood to womanhood, is this period critical. "The girls who fail to exhibit some hysterical symptoms at puberty are few indeed," says Mercier. All of these changes are elaborated through the nervous system and involve expenditures of nervous energy. The energy of the whole organism is one and indivisible. The energy expended wholly or largely in one direction subtracts from the energy to be expended in other directions. Energy consumed, for example, in filling up the intellectual and receptive parts of the brain is paid for in the poor nutrition, the small muscular power, the diminished organic appetites of the scholar.

If these physiological considerations indicate anything, they indicate that boys and especially girls from the age of thirteen to eighteen, should not be subjected to severe

intellectual tasks. This period is the opportunity and the last one to secure a vigorous, well-developed body. Growth, virility, organic soundness are determined largely in this period. At this age the studious, conscientious child, whether bright or slow, should be protected from itself. And the State which seeks, not pedants but healthy normal men and women, should concern itself with the physical as well as the mental development. Success in any calling depends in the long run mostly on staying power, and this is in its final analysis merely a question of physical energy.

The substitution of physical culture is desirable for many of the pupils in our higher schools. These pupils live mostly in the cities. Under the conditions of modern city life, physical culture under expert supervision ought to have a more prominent place in State education. Modern hygiene rescues many weaklings in the nurseries and sends them on to adult life. There is little manual work for the city boy or girl. Athletic sports are possible only to a few. It is just as impossible for either parents or children by themselves to carry out a system of physical culture as to carry out a system of mental culture. Physical culture under the direction of competent instructors—graduates in physical culture such as our larger colleges are beginning to turn out—should be at least an elective for the entire school course, of equal value in marks and examination with courses of study. In other words, we believe it would be better for many of the pupils if at least one hour per day of the school session were devoted to severe appropriate physical training throughout the entire course in place of one of the courses of study.

In Europe the three years of military drill imposed upon all young men is the form of physical culture required by the State. Its immense value in the physical development of the young men is universally recognized.

With us physical culture must take some other form, but should be just as systematic and effective.

While purely gymnastic work for the development of chest, legs, back or any weak portion of the body as indicated by physical examination is probably the most valuable part of such training, such a course might properly include wrestling, fencing, boxing, military drill, dancing, etc. Naturally the use of tools in carpentering, forging and other lines of manual work would be elective and could be made far more thorough than at present. The theory of education has hitherto concerned the intellect only. But why should there be ten or fifteen years of expert supervision of mental development and none at all of physical development? While perhaps no one by taking thought can add one cubit to his stature, any one in youth by taking proper exercise can add many cubic inches to his dimensions in various directions. In other words, culture according to physiological laws will do for the organism what it does for every growing thing on earth—enlarge and improve it greatly. The knowledge and the habit of physical training thoroughly engrafted in the formative period of life is of more consequence for the future effectiveness of the individual than any one of the eighteen branches of study in our school curriculum.

Such a proposal does not involve either a lowering of the standard of intelligence or a lessening of the disposition to work. Physical culture should be, not play but hard work—as much so as mental. The civilized man is as much enamoured of work as the savage is of idleness. We have by law shortened the hours of labor in nearly all occupations, but not for the children. Many high school and college students work almost continuously from rising to retiring. As for the standard of intelligence or learning, it is no longer true that the intellectual education of the individual closes with his school years. Indeed, it just begins both for the classes and

the masses. There are no more excellent text-books on all branches of knowledge possessing any living interest than are constituted by our better class of newspapers and magazines. Through them and the lectures, popular text-books, and all sorts of clubs, the schooling of the people goes on through life. Still more is this true of the professions. Did physicians ever read and study so much? It is absurd to suppose that people would become less intelligent or educated because there was a greater election and a better distribution of the courses of education.

It is not urged that all scholars should go through the same routine of either mental or physical culture. As a rule the children attending our higher schools come from intelligent families, and a greater option in regard to the lines of work could wisely be given. But physical culture should be put on a level with mental culture in point of importance and honor. The State should take the initiative in attempting to secure for the rising generations a vigorous body as well as a vigorous mind. The State may well complain of the present severe and prolonged curriculum of our higher schools which has raised the marriage-age of educated men to thirty-five and of educated women to twenty-six, accompanied by sterility or at least by an inverse marriage and birth-rate. A robust and trained physique would mean a constant decrease in insanity, suicides, in nervous disease, instead of a constant increase as at present. The State cannot afford to ignore these considerations. As guardians of the body and health, physicians must continue to strive to influence public opinion until the requisite demand for hygienic changes shall be set up and made effective.

## A TUMOR OF THE KIDNEY.

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FRANKLIN P. CLARK, M.D.,

DANBURY.

Gentlemen: I wish to present to you to-day the history of a case, which though illustrative of a type rarely met with in general practice, has certain features in connection with it which may not be entirely devoid of interest, or which, at least, may furnish us material on which to base a discussion.

The patient first presented himself at my office early in February, 1900. He was a man, forty-five years of age, well preserved and of good physique, standing probably five feet seven and weighing about one hundred and forty-five pounds. He was a farmer by occupation; had always lived in the country; and having inherited or acquired a fair share of the goods of the world, was not inclined, as far as could be judged to labor excessively, but to live with a decent regard for his physical well being and comfort. He was married and had one child. There was nothing noteworthy to be learned concerning his family history.

He stated that he was abstemious in his habits, and had always enjoyed excellent health until the previous summer, when he noticed that he began to lose somewhat in weight, and felt, as he expressed it, "A little below par," nothing more. Questioning elicited the fact, however, that he had also been subject to much more important symptoms; to wit:

Some time in the month of February (1899), he began to experience a sensation of weight or pressure just below the region of the umbilicus, and was harassed with a frequent desire to urinate,—both of which symptoms



remained fairly constant throughout the ensuing summer months. During this period at frequent intervals (usually about every third month), he would suffer from attacks of hematuria, which persisted, as a rule, for a week or more at a time. On such occasions, at the beginning of the act of urination, the discharge would sometimes appear almost like pure blood, to be followed directly by almost clear urine; but more often this was not the case, the admixture of blood being generally well marked throughout the act.

The case, from this point, takes on a more interesting phase and begins rather peculiar features, and though the incident we are about to relate is doubtless flavored with the colorings of a mind fraught with misgivings, and lacking, perhaps, in an appreciation of the true condition of affairs, yet the general intelligence and well-known integrity of the patient are a sufficient voucher for the main truth of his statement. He asserts that, in midsummer, just prior to his second hemorrhage, he voided with his urine about a dozen pieces of substance of firm consistency, dark in color, a little enlarged at one extremity, measuring about one-third of an inch, "which resembled tad-poles," and that this is the only time he passed such pieces. It is unnecessary to pause here, in order to remark upon the significance of this symptom, inasmuch as it will appear much more fully as the history of the case develops.

In the fall of the year (i.e., in 1899) the patient complained more or less, for a number of days, with symptoms of sub-acute rheumatism of the shoulder and hip joint. He complained of scarcely any discomfort of the back, however, referring little or no pain to the region over the kidneys, but suffered a progressive physical weakness which necessitated his gradual withdrawal from active pursuits. From the point, to nearly the close of the winter, the character of his urine was extremely varied, frequently being clear, then, as he says, "smoky,

bloody or muddy looking." On occasions it would show considerable "brick dust" sediment; and, following soon after the above-mentioned rheumatic attack, he passed several small calculi. Notwithstanding these various symptoms the patient did not yet consider himself seriously ill, though as he admitted, he felt "A little below par," nevertheless, having suffered no particular pain, and, still being enabled to attend to slight duties connected with his farm work, he had not deemed it necessary to consult a physician.

The case progressed in this manner, without the occurrence of anything further of note, until February sixteenth (1900), the day before I was consulted, on which date blood again appeared in the urine, and the patient became the victim of a physical sign of a somewhat unique order, one which not only frightened him and confounded his physician, but which is almost without a parallel in medical history. On the night of the date referred to, he arose in answer to an urgent desire to urinate, and standing up and holding a clean vessel before him, he at last, after considerable effort, succeeded in expelling with a gush from his urethra something that passed with his urine. This "something" was at once put in a vial and brought to me the next day, together with a sample of the urine. The urine and the contents of the vial were immediately delivered to our Dr. Gordon, for microscopical examination, who reports his finding as follows:

"Urine: specific gravity, 1018, strongly acid; albumin, large amount; sugar, absent; granular casts, few in number; blood, large amount; pus, large amount. With the above sample were also seven calculi, which had been previously passed at different times; unable to identify them. The crystals are about half the size of a split pea, saffron-colored, with a coating of pearly white. The 'something' contained in the vial is without doubt a portion of a nematoid, known as the *Estrongylus gigas*. The

part exhibited measures  $9\frac{3}{8}$  inches in length, and in the tail end is a bursa which indicates the masculine gender."

Of course such a finding as here last reported was an element in the case entirely unexpected, and complicated matters to no inconsiderable extent. That it was a nematoid, however, of the gigantic species mentioned, there can be no reasonable doubt, although it was my hastily formed opinion when first seeing it that it was possibly an elongated clot of blood. The body of the curious creature was dark red in color, and about the size of an ordinary lead pencil. The doctor states he had no difficulty in making out the fibres of organized muscular tissue, which could be readily teased, and which ran longitudinally—the whole being enclosed in bundles and encapsulated in a sort of membranous sheath. Then, too, the discovery of a bursa in the caudal extremity, was sufficient evidence of its animal nature and of its specific character as a male strongylus. The specimen was unfortunately destroyed through the mutilation observed in the teasing process; but a pen sketch of it has been made from memory, which represents roughly the outlines of the worm in respect to general conformation and size. The attack of hematuria mentioned continued almost without abatement for three or four days, although, at times, the urine would be clear, and frequently would show uric acid. It was at this period, too, that the patient began to complain of considerable pain in the region of the back, bladder and bowels, which did not, however, extend to the end of the penis, as might have been expected from the existence of calculi. Again for a few days the urine remained quite clear; but during the night of February twenty-sixth, about eight ounces of very muddy, bloody urine was passed, containing several pieces of the nematoid, one of which measured nearly an inch and a half in length and one-quarter of an inch in width. At the same time he passed several small cal-

culi. There was also an admixture of much stringy material, which proved to be shreds of the nematoid.

On March fifth I visited the patient at his house, and found that during the week since the last report, the pain of which he complained and the condition of the urine had remained about the same; but in addition he was suffering from rheumatism of back and shoulder. On the whole, his general physical condition was poor. While up, he did not have sufficient strength to do anything, and the pain interfered with restful sleep. Under treatment the rheumatic element improved, but the urine continued to show blood every few days. These erratic urinary symptoms seemed to indicate that the ureter of the affected side would become plugged at times, during which interval the other kidney excreted normal urine. Ten days later, on March fifteenth, the patient states that he passed another worm (doubtless the other portion of the same one) which I did not see, but which was sent at once to a prominent physician of another city, whose diagnosis of "strongylus" coincides with that already given here. From this time on, for a number of weeks, the patient appeared to be on the gain. On March thirty-first he called on me at my office, looking better, and reporting himself much improved in every respect. The urine was somewhat thick, but had become less acid, contained no albumen, very little pus, and only a few casts. The patient had always, hitherto, been averse to a physical examination, but on this occasion I succeeded in getting him on the table. Pressure over right kidney and ureter elicited some pain; but on the left side did not. I was unable to feel the kidney. Nothing else was discovered, except a slight swelling, on the right side just over the crest of the ilium, which gave rise to tenderness on deep pressure. On the evening of April fourth the patient again called on me looking much better and feeling in good spirits. He reported all of his bladder symptoms as greatly improved. The urine

at this time was neutral in reaction, but this was probably owing to the treatment which had been largely anti-uric acid in character. A general tonic was also prescribed. On May twelfth the patient once more presented himself and reported favorable progress. He had now no hemorrhages and though there was still some irritation of the bladder, as indicated by the frequent desire to urinate, yet it was not nearly so marked as formerly. The history of the case, as herein given up to this point, was now submitted, together with samples of the patient's urine, to Dr. Charles E. Semon of the Johns Hopkins Hospital, Baltimore, the eminent urinary pathologist, from whom the following reply was received: "I was very much interested, indeed, in the report you kindly sent me, and also thank you for the urine. A careful examination showed the presence of tubecasts in small numbers, of albumin, the absence of sugar and blood pigment, and an increased amount of uric acid. Parasitic ova were absent. Otherwise there was nothing of special interest. It seems to me, however, that in view of the extreme rarity of the disease, the case deserves more extensive notice than has been given it." Dr. Semon's reference to the rarity of the disease will be appreciated when it is stated that only seven other cases are reported in literature in which the *strongylus gigas* has secured its admission into the human body. Davaine, who has doubtless investigated this subject more carefully than any other author, states in his work, published in 1877, that since the year 1674 but seven "probable" cases have been collected, and that these may be taken to represent our whole recorded experience of this parasitic disorder in the human subject. Among the seven "probable" cases were two in which the worms had been passed by the urethra only, one in which they had escaped by lumbar fistulae, and four, in which they were found in the kidney after death. Of these four to which alone we can appeal for pathological information,

there is but one in which the condition of the kidney is described with any minuteness; and, in this case the secreting structure was nearly destroyed.

It is said that the male strongylus of this species usually attains the length of about a foot, the female of a yard or more; in other words, it is the largest endoparasite known. Among the animals in which it has been found, are mentioned the dog, wolf, raccoon, otter, seal, and mink. Before entering the human or mammalian body and assuming the form to which the term *gigas* has been applied, it is believed that the parasite passes through other and primary stages, and that certain fish play the part of intermediary bearers. It is inferred by Schneider that the worm known as the *Filaria Cystica*, which is found encysted beneath the peritoneal membrane of the *Galaxis Scriba* (a small fresh-water scaleless fish resembling trout) is the sexually miniature and undeveloped strongylus—i.e., its larva. Should this be true, it is not difficult to conceive how this minute inhabitant of the fish may be occasionally transferred to the various fish-eating animals including man himself. The chosen position of the worm is the pelvis of the kidney, in which it lies in a coil or knot; but as it has been passed with the urine in the human subject, it is obviously not limited to any sub-division of the urinary cavity. In dogs in which opportunities for observing the habits and effects of the parasites have been more frequent than with other animals, it has been found stretched along the whole length of the ureter, in the bladder, in the peritoneal cavity (into which it had passed from the renal pelvis), and in external swellings in the neighborhood of the penis. The serpentine proportions of the creature are testified to by some of the older writers, who, when they found these parasites in the kidneys of the wolves and dogs, described them as serpents in this situation. The *Syngamus trachealis*, which so often causes "gapes" in poultry, is a much better

known, but similar strongyle. Concerning the position occupied by the strongyle in our patient, before his expulsion, there is good reason to believe, from the symptoms enumerated, that he had been coiled originally in the pelvis of the kidney; that at this date, during the early period of his growth, there had been a sub-normal secretion of urine by this kidney, which found gradually increasing difficulty in gaining a way of exit through the ureter on the affected side; that as the creature became more fully developed and required additional space, a portion of the tail end was thrust into the ureter, which thus became more nearly occluded, but which continued to serve in a measure its mechanical purpose, i.e., in this instance, of conveying a mixture of renal excretions and nematoid excreta, which resulted in muddy urine; that, finally, through muscular action, aided by the force of gravity or the uretal current, the creature's body was dismembered and the major portion passed down through the ureter into the bladder and was expelled—the other half finding its way out in a similar manner, a few days afterwards, as already observed.

That the worm should have been disrupted, in the way described, is not surprising when we consider the tortuous passage through which he had been forced, and especially when forced wrong end first.

That the patient's bladder symptoms should be less aggravating, for a period, after the expulsion of the worm, was perhaps to be expected; but the question may well be asked, what damage, if any, was sustained by the kidney itself? The subsequent history of the case as hereinafter submitted, is, perhaps, the most satisfactory answer that can be given to this:

For some weeks following the last preceding report the patient was quite comfortable; he passed no blood, had but little kidney irritation, and was enabled to partially attend to his business. A feeling of general weakness was the symptom principally complained of. About

this time, however, some kindly disposed but officious friend persuaded him to try an "Oxydonor." As some of the gentlemen present may have not yet become acquainted with this new remedial agent, and are, perhaps, curious concerning its *modus operandi*, I have considered it my duty to give a brief description of it. The "Oxydonor," so called, is an instrument, consisting of a small metal cylinder, nickel plated. The contents of this cylinder are yet unknown—it remains a mystery. To one end of the cylinder is attached a cloth-covered wire. The other end of this wire terminates in a metal plate, which by the aid of a strap and buckle, is kept in close contact with the surface of the body. Such is the "Oxydonor." It is claimed for this instrument that it causes the system to absorb more oxygen, and allows all noxious gases to pass over the wire to the secret contents of the cylinder. It was used about eight weeks by our patient, during which time no medicine whatever was taken. At the expiration of this period, near the close of July, I was requested to visit him again at his home, in the country, about seven miles distant. I had not seen him before since the middle of May, and when I called I was much shocked by the change that had taken place in his physical appearance. He looked indeed like a very sick man—like one suffering from an incurable disease. He had lost much flesh, was anemic, and very feeble, being scarcely able to walk about the house. His pulse registered about eighty-eight. There was no temperature. A physical examination was now made, revealing an astonishing condition. There was a marked enlargement of the entire upper abdominal region, but especially on the right side. The superficial veins were also enlarged. Marked dullness on percussion was obtained over the lower portion of both lungs, extending down, on the right, along the lower border of the liver, and anteriorly to the umbilicus;—below that point was tympanic. Without knowledge of the pre-



vious history of the case, an impression would have been gained that the swelling was an enormously enlarged liver, or a tumor of that organ.

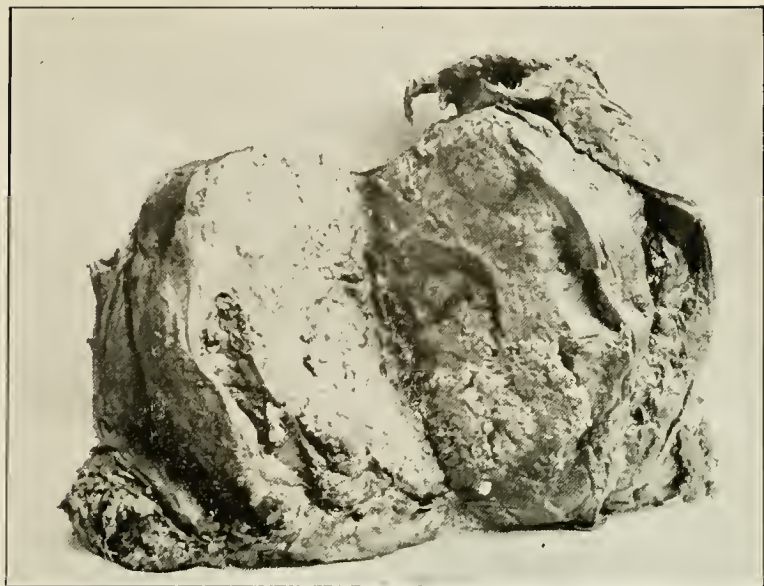
I urged the patient at once to consult some prominent specialist, and the next day he went to New York and placed himself under the care of Dr. Abbe. In a day or two the doctor performed an operation at Roosevelt Hospital. After making an incision, he discovered that the case was incurable, closed the incision, and in about two weeks sent the patient home. From this time to the day of his death, September fourth, it was simply a gradual loss of strength. There was no fever—no pain, except in the back, and that was not acute. The urine was clear and of normal amount. One day only (about a week before his death) the patient passed a small quantity of blood.

Six hours after death an autopsy was held, of which is appended the following brief report:

“Body much emaciated. Great fullness of the liver region. A healed incision was found, extending from the sternum to the umbilicus, a further curved incision, partially healed, extending from the region of the gall-bladder, to the last floating rib. Lungs normal, small amount of fluid contained in the pleura; right lung slightly adherent at the lower part. Heart normal. Liver very much enlarged, pushed up and to the left. Underneath the right lobe of the liver was a large mass (closely adherent posteriorly and laterally) which had crowded the liver up and to the left. This mass was an enormously enlarged kidney. Left kidney enlarged about one-third; otherwise healthy. Stomach, bowels, spleen and bladder normal. No enlarged glands found anywhere. The removal of the kidney mass from contiguous tissue, was a very difficult operation. On the inner side of the mass, lying in apposition to the spinal column, was a secondary swelling which proved to be an

aneurism of the aorta. The right ureter could not be distinguished. Some idea of the enormous size of this growth may be obtained, when it is stated, that, though the weight of the healthy human kidney is only from four to six ounces, that of our patient weighed at least ten pounds—an increase of thirty fold in weight! Externally the mass felt hard and smooth, i.e., sarcomatous in character; but on section its true pathological nature was at once revealed, i.e., it was obviously a tuberculous kidney of the diffuse variety, filled throughout, even into the cortical substance, with the firm, caseous material which distinguishes this form of tubercle, before its destruction from degeneration. That it was what is described by authorities 'primary renal tuberculosis' is made evident from the history of the case, and the absence of tubercular disease from the lungs, glands, or other organs of the body.

Though primary tubercular disease is not commonly met with, yet a number of instances have been recorded of only one kidney (usually the right) being affected in this manner, generally caused by an external blow over the kidney, or by some previous injury or irritation of the renal structure itself. In the present case, the injury done by the strongylus, during the period of its growth and development in the renal pelvis, must be considered the prime etiological factor. In regard to the time that elapses between the commencement and close of renal tuberculosis, its limit is sometimes difficult to forecast. One prominent author on this subject states, that "many cases are cut short by pulmonary phthisis, and many by meningitis; but taking those in which the beginning has been marked and the end mainly renal, it would seem that the range extends from about four months to as many years." In the case of our patient, no tumor was perceptible at the examination in April, but doubtless the growth began soon after that date; so it may be fairly





said that the enormous tuberculous mass removed at the time of his death in September, developed in the course of about four months.

In his description of the morbid anatomy of this disease, Belfield in his "Diseases of the Urinary and Male Sexual Organs," p. 250, says: "Primary tuberculosis usually affects one kidney, more frequently the right; the other may be perfectly healthy or the seat of chronic inflammation. In the diseased kidney itself there is observed a diffuse inflammation with the aggregation of tubercles into masses of varying size; a large part or even the entire organ may be transformed into a firm cheesy mass. The increase in the size of the organ may be extreme; Klebs describes a case in which the right kidney was eleven inches long and weighed seventy ounces." In referring to the prognosis and treatment of this disease, this author continues: "The disease is incurable and always tends to a fatal termination." Remedies are powerless to affect its course, and are useful only in mitigating the symptoms. Supporting remedies are called for, the strength being kept up by the use of concentrated nourishment, quinine, iron and cod liver oil.

## THREE CASES OF APPENDICITIS COMPLICATING PREGNANCY.

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S. B. OVERLOCK, M.D.,

POMPERY.

The following cases of appendicitis complicating pregnancy are to be given treated from a clinical standpoint—the former condition as a coincidence with the latter—no attempt being made to analyze conditions, if there are such, that would favor the appendix taking on an inflammatory process during pregnancy.

Case I.—Was a primipara twenty-eight years of age, family history and previous personal history good. I had never seen patient until called to the bedside in her confinement. Labor had already been in progress several hours; she then informed me that she was supposed to be at the end of the eighth month, that she had intended to return to her home in a neighboring city on the following week. Her family physician had made pelvic measurements previous to her leaving home, had said that she was perfectly normal and that she could stay from home until time mentioned—that is, what she and he supposed the first week of the ninth month. On digital examination an apparently normal pelvis was found, bones large, head in left anterior position and fixed; os dilated size of half dollar and membranes ruptured. After a labor of six hours, and head well down on perineum, pains stopped and she was easily delivered with forceps—child was evidently at term. At my visit on the following day my patient looked flushed and a pulse of 110 led me to take temperature, which was found to be

103° She, however, said that she was feeling perfectly well, no pain, but very little soreness and flow normal. Next morning conditions remaining practically the same, two consultants were called, who at once said puerperal sepsis. As everything that I could discover about the parturient canal seemed normal, as temperature had risen within at least twelve hours after birth of child, I could not agree with their diagnosis. In the afternoon of the third day the abdomen began to be markedly tympanitic and the general condition of the patient became serious. On the morning of the fourth day I asked a well known Boston physician to see her, who agreed that there was a peritonitis from some unknown cause but not depending on child-birth. Patient failed rapidly, dying on sixth day. Post-mortem revealed a gangrenous perforated appendix and resulting septic peritonitis.

Case II.—Is a multipara aged twenty-nine years, a robust woman given to golfing, swimming, driving, and out-of-door life. Has a justo minor pelvis with a possibly imperfect development of right lateral mass of sacrum. Beside the ordinary diseases incident to childhood had chorea in early life—has had malaria and resulting intercostal neuralgia. Bore her first child seven years ago—states that she was delivered by aid of forceps, that she had puerperal fever which caused loss of all her hair. Second child was born May eleventh, 1897—was attended by myself. Head an occipito posterior presentation and instrumental delivery, puerperium normal and without incident. Preliminary to last pregnancy she menstruated January nineteenth, 1900—had nausea of pregnancy, which has always been an accompaniment of gestation. On March sixth patient, slipping, fell onto one knee, widely separating thighs. The accident seemed to her trivial and the evening was spent in the usual manner. At 3 A. M. on the following morning she was awakened by severe abdominal pain which the nurse could not

control. After talking with the nurse by telephone and satisfying myself that the pain was not that of threatened abortion, but probably due to intestinal gas, I ordered a suds enema and later unless relieved ten minims of deodorized tincture of opium, fifteen minims of aromatic spirits ammonia. Pain was relieved and I saw the patient at nine o'clock in the forenoon; chart showed a temperature of 101.5°—pulse 110—a suspicious tenderness in right iliac region and rigidity of abdominal muscles. Vaginal examination showed a retro displaced uterus, fundus plainly felt through posterior vaginal pouch. Could not satisfactorily make out tubes and ovaries; later it was found possible to replace uterus with patient in knee-chest position. It, however, at once assumed its mal-position when patient was lying on her back. This persistent position of uterus gave rise to several suppositions as to cause and involved the consideration of several previous conditions—viz. I had not made examination at the end of puerperal period three years before. In October, 1899, while dancing the patient's feet slid from under her and she fell, striking violently in a sitting posture on the buttocks—she had as before said fallen the preceding evening—consequently the uterus may have been in this position since birth of second child three years before—may have been in this position since the fall of preceding October, pregnancy having taken place in a retro displaced uterus. It may have been dislocated by the fall of March immediately preceding attack. Evidence of same weight against suppositions one and two is the fact that there had never been dysmenorrhea or other marked disturbance of menstrual function. The usual treatment was carried out without any abatement of symptoms for two days. On the third morning I asked Dr. Maurice H. Richardson, of Boston, to see her. He was out of town and did not reach the patient until evening. During the day there occurred a free defecation for the first time during the attack and when my consultant



arrived there had been marked amelioration of symptoms. Dr. Richardson, not feeling certain that the appendix was involved, advised against operative interference.

The history of the case until the end of the eighth month of pregnancy was that of repeated mild attacks, at intervals of about three weeks, and from two to four days' duration, the uterus in the meantime gradually lifting and assuming the position usual in pregnancy.

Labor began in the early morning of October twenty-eighth, and I was called after the pains had been present several hours. There was an occipito posterior presentation present which I was unable to correct. Labor progressed slowly and patient becoming tired, all progress stopped at four p. m. and one hour later she was delivered by aid of forceps. An attempt to rotate head with instruments failing, the child was delivered in its original position. The perineum was torn back about two-thirds of its breadth and was repaired, but not with as good results as at the preceding labor. After the delivery of the child when the uterus was being compressed it was found to be held fast by upper lateral portion to structures on the right side at the level of the umbilicus. For several days, after-pains invariably set up intestinal peristalsis and a tendency to dejection. After a week the uterus sank into the pelvis. The patient was in excellent condition until the fifteenth day. On November eleventh, the fifteenth day from the birth of the child, the patient had a severe chill lasting an hour and the temperature rose to 104.5°.

After as careful examination as the flabby condition of the abdominal wall would allow, I could find nothing definite; the tenderness even that had been almost constantly present during the preceding seven months was absent. It occurred to me that there was either a bacillus coli infection through the ruptured perineum or that the chill was due to malaria. Examination of the par-

turient canal and uterus gave no microscopical evidence of the former, so a blood-examination was had and the microscopist reported plasmodium malariae present. Therapeutic doses of quinia were given and the temperature fell to  $101^{\circ}$ , on the second day after the chill only to rise again on the following day. On November seventeenth, the sixth day from the initial chill, it reached  $105^{\circ}$  in the afternoon and a tumor could be made out in the right iliac region. This condition confirming Dr. Richardson again saw the patient;—there was no doubt in his mind that the appendix was the cause of the trouble, but as abscess was evidently walled off and the patient holding her own, he advised no interference as long as present conditions held.

Patient by careful attention to nourishment, evacuations, sleep, etc., was kept in very good condition until the evening of November twenty-ninth, when she began vomiting, attended by frequent thin dejections from the bowels, bad skin, disturbed sensorium and rapid pulse. Strychnia and morphia were used to brace the patient during the night and preparations made for operation on following morning. Assisted by Doctors Morrell and Russell I made an incision eight centimeters in length and three centimeters above Poupart's ligament at its outer portion, the position being selected in order to avoid entering general peritoneal cavity and to strike abscess at lowest point. There was abundant discharge of pus, drainage with gauze and flexible rubber tubing was instituted. No attempt was made to remove the appendix, which, from careful exploration of the abscess cavity, was well back of the caecum. The patient took the anesthetic badly and fifteen minutes were consumed in operation and subsequent dressing.

The ether was well recovered from and the temperature fell to normal in eight hours. Three days after the operation the drainage-tube became impervious and had

to be removed, leaving the drainage unsatisfactory. One week later there was another rise of temperature and on vaginal examination bulging was found to the right and posterior to the cervix. A crescentic incision was made here with a long finger knife and a full escape of pus followed, drainage was established and temperature gradually fell to normal.

Several errors in operative technique will occur to you. In my anxiety not to invade the peritoneal cavity my incision was made too low down, so that the drainage-tube entered the pus cavity at an angle. Two unpleasant experiences with the glass drainage-tube in previous pus cases made me hesitate to use it here. A glass tube or posterior drainage would doubtless have obviated the vaginal incision.

Present condition of patient: She is in good flesh and strength, there is a thickening over region of appendix and slight tenderness on deep pressure; uterus retroflexed and firmly bound down, right tube and ovary cannot be made out in exudate on right side. After walking for a long distance or becoming tired from any cause, there is a sense of constriction in the right iliac region. There is an irritable condition of bladder and more than usual pain at alternate menstrual periods.

Case III.—Primipara twenty-three years of age—menstruated last July eighth, 1900. On January twentieth, 1900, was seized with severe abdominal pain, temperature,  $102.5^{\circ}$ , pulse 112, tenderness over appendix marked; abdominal muscles rigid and face expressive of pain felt. Ice bags were applied and free action of the bowels obtained in eight hours. Temperature reached normal after three days; careful directions were given as to diet and exercise. Was confined April eighteenth, of the present year, labor normal and child small. Present condition: Well defined mass under so-called McBurney point—constipated and has a pseudo membranous enter-

itis of mild grade; should have operation to prevent further trouble or a state of prolonged semi-invalidism.

These cases are not a sufficient number from which to draw any conclusions of worth. Medical literature is not replete with cases of pregnancy complicated by acute appendicitis. In view of the fact that the pelvic organs are operated upon for various other causes during gestation, there would seem to be good ground for the belief that an appendectomy might be done with comparative safety during the early months of pregnancy.

SURGICAL PAPERS.



# GUN SHOT WOUNDS OF THE BRAIN, ESPECIALLY OF THE FRONTAL LOBES.

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HARMON G. HOWE, M.D.,

HARTFORD.

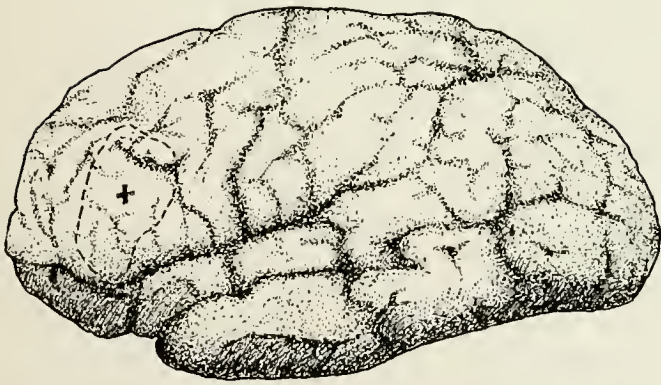
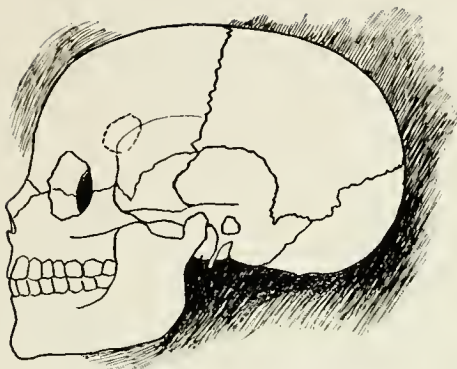
That the frontal lobe of the cerebrum may be extensively lacerated without the wound itself interfering with the physiological processes of life, is a fact which the following case illustrates:

Miss C.; age thirty-six, single, white, American born of American parentage, had suffered for a year and a half with melancholia and insomnia, requiring a companion constantly with her. On December last the companion left her and during a spell of extreme mental depression she attempted to commit suicide, with a loaded shot-gun. This was on December eleventh, 1900, and occurred in one of the Southern States. She was placed in the hospital and treated for sometime, the notes of which I am unable to present. On January third, twenty-three days after the injury, she was brought to Hartford. On January fourth I found her suffering from a large suppurating wound in the left temporal region with a pulsating tumor occupying one-half of the wound. The point of entrance in the skull was an inch and a half posterior to the outer angle of the orbit and three-quarters of an inch from the upper rim of the orbit. The greatest width of the wound of entrance was three-quarters of an inch; the greatest length, one and one-quarter inches. A portion of bone was missing from both tables of the skull. Posterior to the wound there was a loose piece of the outer table. The edge of the bone was sharp and ragged and required trimming. The temperature of the patient

was  $99^{\circ}$ ; the pulse  $80^{\circ}$ , good volume, regular; respirations normal and regular; no appearance of pressure, sepsis, or paralysis about the patient. The patient was dressed and about the room; had traveled from the South two days before, being on the way about a day and a half, without suffering any particular fatigue in appearance, or rise of temperature, or increase in mental symptoms. Made arrangements to explore the wound under ether the next day. On December fifth the patient's pulse was not quite as strong; temperature  $101^{\circ}$ , just beginning to show absorption of pus, though aside from her ordinary condition of melancholia no mental symptoms were present. The patient was placed under ether, and upon critical examination of the wound, found a cerebral hernia the size of a chestnut occupying a portion of the wound of entrance, along side of which was a fistulous opening into the brain passing inward and backward and downward admitting the finger, which upon being introduced ran against a ragged piece of bone embedded in the brain about one inch below the surface. This bone was fixed, but lying in the cavity nearly perpendicular to the anterior fossa of the cerebrum and fixed at its base. On withdrawing the finger quite an amount of pus was discharged. The presence of this large piece of bone as a foreign body in the brain substance was acting as a source of sepsis and therefore it was deemed best to remove it at once, which was done directly in the line of its entrance. The engagement of the bone was broken off with some force, but I think without any extra laceration of brain tissue. Several shot were also extracted from the cavity occupied by the bone. The abscess cavity was as large as a small lemon and reached down to the base of the skull.

The pieces of bone extracted, as you see by the specimens, was almost the complete portion missing from the wound of the inner table, while the outer table was probably comminuted by the explosion. The greatest di-







imeter of this piece of bone was an inch and a quarter, rather oblong in appearance. There was very little hemorrhage following the extraction. The wound was thoroughly irrigated, the edges of the bone were trimmed off smooth, one small piece of loose bone from the outer table was removed, and the wound dressed antiseptically and the patient put to bed.

January sixth, patient seems dull, temperature  $100^{\circ}$ , pulse 80, respirations 20.

January seventh, dull mentally, sleeps a good deal, pulse 90, temperature  $101^{\circ}$ . Patient from this point gradually became comatose, and died on January tenth.

January eleventh, post-mortem by Dr. B.; *dura mater* adherent. Around the edge of the wound and under the frontal lobe of the cerebrum within the wound area were found six No. 8 shot embedded in the *dura mater*. A small sinus led from the pus cavity to the ventricles, along which pus could be traced into the spinal canal. The vascularity of the inner surface of the meninges was markedly increased and pus covered the surface of the hemispheres. The distance from the anterior angle of the orbit to the lower edge of the wound, one and one-quarter inches; distance from upper circumference of orbit to the nearest point of wound three-quarters of an inch; greatest diameter three-quarters of an inch; the length of the wound one and one-quarter inches. The wound cavity in the frontal lobe inclined obliquely inward and downward.

#### REMARKS.

It seems incredible that the patient could have traveled from the South so recently and presented such a good appearance one day after her arrival with the amount of brain destroyed and the amount of pus occupying the wound cavity with the anterior lobe almost severed in two portions, the laceration extending to the base. Death occurred only upon advanced suppurated processes and upon the thirtieth day after the accident.

In the *Boston Medical and Surgical Journal* of March seventh, Dr. Edward Sweeney gives a case in which the whole breech-pin of a shot-gun was extracted through the left orbit after enucleation of the eye and extraction of the supraorbital plate. The breech-pin occupied the anterior fossa and had almost destroyed the whole of the frontal lobe. The accident occurred on November twenty-first, died December nineteenth. The only symptom referred to the body was a state of complete hyperesthesia which disappeared after the extraction of the breech-pin. This case was kept in bed after the second day until death, which was due to basilar meningitis.

Dr. H. T. Noyes, of New York, also gives a case of the breech-pin of a shot-gun passing through the right orbit into the frontal lobe almost entirely destroying the second and third convolutions. The piece of iron weighed two and one-half ounces and was four and one-half inches long. The patient recovered and after five months began to feel pain; was operated upon, dying after the operation.

Mr. C., one of my own cases, age eighteen, bullet wound of the right frontal lobe. Bullet entered three-quarters of an inch posterior and above the outer angle of the right orbit, passing in and slightly upward and was embedded in the sphenoid bone, destroying perhaps one-third of the right frontal lobe. The patient never recovered consciousness and died at the end of the fourth day without any other symptoms than coma. Cause of death injury of the base, and not of the frontal lobe.

Dr. Charles Phelps in his book entitled, "Injuries of the Brain and Membranes," D. Appleton & Co., has given the history of eighteen basilar gun-shot wounds with post-mortems and fourteen vertex injuries with post-mortems. In one hundred and ten cases collected by him, fifty-eight involved the frontal lobe only; twenty-six were injuries of the right frontal lobe; twenty-four

of the left frontal lobe; and eight of both. In analyzing these cases not one of the twenty-six involving only the right frontal lobe gave any history of mental derangement other than that due to concussion. An injury of the left lobe nearly always induces the symptoms immediately or soon after the accident. In studying the points of exits and entrances of bullet wounds in the skull, the entrance is usually very much smaller in the external table than the exit, and the exit wound is smaller in the internal table than in the outer table. The point of entrance in the inner table is marked by numerous stellated fractures while the outer table presents a smooth, small, usually round hole. The point of exit is marked by exterior bunching of bone, or none at all. In shot-gun wounds all rules are broken because of the numerous projectiles and the size of the bore of guns and the spread of the discharge. The case presented is an illustration of this factor. Usually the whole charge is retained in the calvarium and no point of exit is seen, and often other debris than bone are found in shot-gun wounds.

#### PROGNOSIS.

Generally speaking a gun-shot wound of the brain is quite fatal. In one list of ninety-two cases five only survived. In another case of one hundred and thirty-seven cases, six only recovered. The extent of injury and the caliber of the ball in pistol-shot wounds are factors in the mortality in a greater or less degree. In shot-gun wounds of course the caliber of the shot is of no account, but the extent of injury to brain tissue is the great factor.

The causes of death are shock, hemorrhage, sepsis, and the presence of foreign bodies causing the cerebral irritation.

#### TREATMENT.

This would be governed entirely by the rules of surgical treatment elsewhere in the body. Foreign bodies,

when they are inducing hemorrhage, sepsis, shock, or irritation, should be removed if possible. The scalp should be shaved and cleansed. Depressed bone should be elevated, the surface of bone left smooth, hemorrhage arrested, powder and debris removed, the wound made and kept free from sepsis, the patient put to rest and kept there until all primary danger of cerebral irritation is passed. Secondary results may be deferred for years.

Dr. Howe also presented an interesting case to show how extensive might be fracture of the skull and loss of bone. The man had been in the Hartford Hospital and a history of the patient was given by Dr. McKnight. The man jumped off a trolley car while it was in motion. He struck on his head. The entire side of the head was swollen and there were evidences of compression. An incision was made over the swollen area and a fracture discovered. The bone was bare. A button of bone was removed but still the lower corner of the injured portion remained depressed. Trephining was done a second time. The bones were found to be comminuted. A triangular piece was taken out but still, although the remaining portions could be elevated, they could not be kept so without the removal of a large surface of bone. The skin was drawn together and fastened with catgut sutures. Recovery was rapid, the dressing being changed at intervals of several days. The man left the Hospital, March 26.

On the third of April he again entered with a temperature of  $104^{\circ}$  or  $105^{\circ}$ , pain being the only local symptom. There were no eye symptoms. We cut down and took out a piece of bone and opened the dura mater to be sure that there was no pressure from an abscess. The temperature, however, continued to rise and evidently there was somewhere an accumulation of pus.

Upon the twenty-first day of April, nineteen days after the second admission, another large portion of bone was

removed above the ear. The brain was exposed and explored in all directions with a probe, to the length of an inch and a half. A sinus was thus entered and about two and a half ounces of serum was obtained. The man slowly recovered. The patient was presented to show how extensively the brain can be explored. An ordinary grooved director was used and it was carefully passed in and out of the same tract without any lateral motion. A tent was inserted and the sinus drained.

From April twenty-first to May twenty-second the patient did well, the bone filling in rapidly. There are two lessons in the case: First, the ease with which exploration of the brain may be done; second, the folly of trying to save bone. The bone was not dead, but there had been no attempt at union. The entire space of brain substance left bare was three inches in diameter.

## CASE OF FRACTURE OF THE SPINE, WITH RECOVERY.

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APPARATUS FOR APPLYING PLASTER JACKETS WITHOUT  
SUSPENSION.

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JOSEPH E. ROOT, B.S., M.D.,

HARTFORD.

In May, 1900, Joseph Paysor, age forty, a lineman, while engaged in cutting branches from a tree, fell a distance of thirty feet, striking upon his spine on the curb stone, with the result of fracturing the vertebrae at the junction of the dorsal and lumbar regions, and paralysis below the point of fracture immediately obtained.

He was conveyed with great difficulty to his home, a short distance away, where I was summoned and found the patient suffering great pain, giving the above history and showing a very marked deformity of the spinal column.

Having made the patient as comfortable as possible I returned to my office to get my plaster jacket apparatus, securing also my camera and flash light, and with the aid of the latter was able to secure the photograph reproduced below, which shows the deformity:

By the use of the ordinary yoke under the arms and head, I suspended the patient about six inches from the floor, and by careful manipulation and extension was able to completely reduce the fracture.

As soon as this was accomplished sensation and motion began to return to the limbs and all points below the fracture. A heavy plaster jacket was then put on from axilla to well over the hips, and when firm and hard the patient was placed in bed, where he remained six weeks, at the end of which time another cast was put on by use







Fig 3

of a portable stretcher which I constructed, and show herewith:

The necessity for such a contrivance was the fact that suspension by the ordinary method of applying a jacket would jeopardize the union of bone and ligament already made.

Within three weeks the patient began to sit up and gradually get about.

In four months from the time of his accident he was able to resume work and shortly thereafter was able to climb poles and do the work of a regular lineman. No degenerative changes have occurred in the cord, and there remains but slight deformity in the spinal column, as shown by the accompanying photograph, and the subject himself, whom I now present for your consideration and inspection.

This apparatus consists of a frame made of maple strips three inches wide and seven-eighths of an inch thick. Its length is six feet, its height eighteen inches, and the width twenty inches. A roller joins the standards at each end, between which a double piece of cotton cloth is stretched, being made taut by a crank and ratchet at one end. The standards are kept upright by braces falling upon the bed-piece and when not in use the whole collapses into a very compact and portable frame. This being the height of an ordinary bed the patient can be easily rolled upon it. The whole frame is then raised upon two chairs, which brings the patient's body to the height of the operator's waist. The patient is then placed abdomen downwards, a hole being cut in the canvas to let the face drop through. The plaster bandages are then applied in the usual manner, the cloth upon which the patient lies becoming a part of the cast.

The apparatus shown you is invaluable in applying plaster casts to adults with fracture of hip, or femur when a spica is required, in women who are weak and liable to faint, and in applying the first jacket to easily frightened children.

COMPLICATIONS IN STRANGULATED HERNIA  
WITH A DISCUSSION OF THE METHODS OF  
OPERATING FOR VENTRAL AND UMBILICAL HERNIA.

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When the operation for strangulated hernia is to be performed there are certain important conditions to be borne in mind. Prominent among these is, where is the strangulation located? Is it in the inguinal canal or at the internal or external ring? Or may not the constriction be located at the neck of the sac, or, in large hernia, may it not be a band of adhesion constricting a loop of the gut in the hernial sac, or still further, may it not be a constricted portion of gut located beneath a mass of omentum and entirely concealed from the view of the surgeon, and when the omental mass is returned the strangulation still remains? These are a few of the conditions which should be carefully borne in mind by the operator.

Dr. Henry O. Marcy states (*Anatomy and Surgical treatment of Hernia*), that the neck of the sac is usually the seat of constriction. He describes the physiological changes which in the end develop into a firm thickened constriction at the neck of the sac. These plicated folds are caused by the resistance which the hernial tumor meets in its development as it passes through the inguinal canal. The importance of this constriction thus made at the end of the sac is still greatly underestimated, and the surgeon has too often in mind that the parts to

be operated upon are only the borders of the more or less altered tissue which enter into the formation of the canal, rather than the deformed pathological covering of the tumor which in the descent into the scrotum has been folded over and over and by inflammatory processes consolidated into a dense, unyielding, constricting ring. This erroneous opinion that the strangulated hernia was due to the constriction of the external ring upon the intestine, has more than once led to fatal consequences. Acting upon this principle surgeons enlarge the inguinal ring and restore the parts into the abdomen, thinking they have removed the strangulation; but the bad symptoms persisted, became aggravated, and the patient perished without any apparent cause of death. Marcy states that out of nine cases of strangulation, eight are owing to a constriction of the neck of the sac. There may be more than one of these constricted bands. "The American Text Book of Surgery" comments as follows: "The seat of the stricture may be at the hernial orifice or in the sac itself. When it occurs at the neck of the sac it is due to the thickening at this point, and the fusing together of the various pleats and folds into which a large sac is thrown when it passes through a small opening. The stricture may be in the sac itself, produced by bands of adhesion which stretch across it. Cases are on record where the strangulation has been caused by the twisting of a loop of the protruding bowel in the sac." Furthermore, a small knuckle of bowel may become strangulated behind a piece of omentum and be out of the reach of the surgeon. There is no impulse on coughing, not much tenderness, and the tumor may feel soft and lax. A knuckle of gut may become strangulated inside the sac of a large hernia, and yet the hernia as a whole may give no evidence of strangulation.

The writer recently had a case of this kind. The patient was suffering from a direct inguinal hernia of large size and long standing. When the sac was opened there was

a large mass of apparently healthy intestine. On more careful examination, it was found that a small knuckle of intestine was constricted by a fibrous band, causing a complete constriction of the gut. This band was incised and the intestine relieved and returned into the abdominal cavity with a good result. Had the strangulated mass been successfully reduced by taxis, or had the mass been returned after the sac was opened, without finding the constricted knuckle, the strangulation would not have been relieved.

Again, the hernial tumor may have all the symptoms and appearances of strangulation and yet not be the seat of obstruction. All these possibilities of error emphasize the need of extreme care on part of the surgeon.

Occasionally it happens that after the reduction of a hernial tumor, symptoms of strangulation still persist, and when such an occurrence takes place, it is due to one of the following conditions:

First. The return of the gangrenous or injured bowel.

Second. Paralysis of the bowel existing as a result of general peritonitis.

Third. The presence of a second strangulated hernia.

Fourth. The return of the hernial tumor en masse.

In the latter case, the tumor disappears without a gurgling sound, and the constitutional symptoms are still unrelieved. Incision should be at once made and the condition properly treated. In certain rare cases the sac is ruptured and the gut makes its escape into the subserous connective tissue, the protruded bowel still remaining strangulated.

Maurice H. Richardson endorses the foregoing statements as follows: "Intestinal obstruction persisting after herniotomy should suggest the reduction en bloc, or twisting of the intestinal loop; the former accident occurring not infrequently after taxis, as well as after herniotomy, is caused by a forcible replacement of the gut,

constricting ring and all, inside the abdominal cavity. The reduction en bloc is not likely to occur after the complete division of the ring. It may take place when the incision is made blindly with a probe pointed bistoury deep upon the finger." Obstruction by twisting is extremely rare. It cannot be prevented and can only be demonstrated by secondary exploration.

#### RADICAL CURE OF VENTRAL AND UMBILICAL HERNIA.

Authorities approach this subject with great caution. It is not looked upon as a very successful field for operation. As the American Text Book of American Surgery states: "The radical cure of umbilical hernia is rarely undertaken, because of the unsuitability of the subject for operation. If the operation be performed, it should be done if possible without opening the sac. The neck of the sac is dissected out and tied after the return of the protruded bowel and then the sac removed. The pillars of the ring are now sutured with stout silk and the wound closed and a drainage inserted, and antiseptic dressings applied." This subject has also been quite extensively written upon by Drs. Bull and Coley, two of the best known operators in this country, who are of the opinion that this form of hernia operation is not to be recommended except in special cases for the following reasons: The subjects are, as a rule, extremely unfavorable for operation; the abdomen is large and pendulous; a thick layer of fat interferes seriously with primary union; the muscular layers are atrophied; more important still, the necessity of ligating large masses of omentum and separating extensive adhesions, make the operation one of decided risk of life. Finally, the operation, if successful, gives but little guarantee of permanent cure. Relapses are very frequent. The same authors, speaking of ventral hernia, remark that the radical cure has been frequently attempted by removing the cicatricial parts of the orifice, and uniting the layers of the abdominal wall

by sutures of different material. The operation seems to have trifling mortality, but the permanency of cures is in doubt.

Richardson takes a more hopeful view of the subject when he says: "The treatment of umbilical hernia in adults should be operative in nearly all cases, because of the difficulty of retaining the hernia in the abdominal wall by any form of truss and by the danger of inducing inflammation by any kind of mechanical treatment. His operation consists in making a long incision around the tumor, including the umbilicus and a large part of the hernial covering. This incision should open the sheath of the rectus muscle on either side. After the sac has been opened it should be carefully examined for coils of intestine which should be reduced into the abdominal cavity. Prolapsed omentum should be ligated and removed. After the sac has been emptied of its contents it should be dissected free from surrounding structures, all redundant portions removed, and the edges carefully sutured together. The muscular bellies of the recti should then be approximated by buried sutures, and the external superficial suture of the wound closed without drainage. Richardson also states that ventral hernia may be operated upon for radical cure in the same way.

Dr. Howard A. Kelley has the most methodical operation for ventral and umbilical hernias of any recent operator. According to his method he sacrifices, it would seem, an unnecessary amount of tissue by incising the borders of the opening so as to be able to separate the different layers of the abdominal wall. The peritoneal layer is brought together from top to bottom by a continuous suture of catgut. The fibrous layer, together with the recti muscles, is now united by a series of silver wire or silk-worm gut mattress sutures.

The strong fibrous tissues on either side, somewhat retracted beneath the skin and fat, are caught up with several pair of artery forceps and drawn out, the stout sil-



ver wire mattress sutures are now drawn through the fascia and the underlying muscles by a carrier, so that one embraces about one centimeter of the tissue, and is situated about two centimeters distant from the last suture. The suture enters and emerges about eight or ten millimeters from the edge of the cavity. After the sutures are in place they are taken up one by one, each end in a pair of forceps and tied or twisted off, and the ends of the silver wire turned down to the side. Catgut sutures are then placed between the permanent ones, leaving no loophole for the escape of the intestine. By this means a firm closure is strong enough to act as an effectual barrier against any tendency of the intra-abdominal pressure to force the intestines out again. If there is a subcutaneous layer of fat, it is united with a continuous catgut suture. The skin is now united with the subcuticular catgut suture, and the abdominal dressings are applied.

The one important factor in the radical cure of ventral and umbilical hernia is to relieve the tension on the sutures which approximate the freshened surfaces of the abdominal wall until a firm union has taken place. Dr. Kelley is the only authority here cited who has recognized this principle. The objection to his operation is that he uses buried silver wire mattress sutures, which are liable to be the source of an inflammatory and suppurative process in the future.

The writer will give here the technique which he has used in an interesting series of extreme cases with most satisfactory results. It is based on the use of silver wire retention sutures for the purpose just stated.

#### TECHNIQUE.

Ventral hernia may be considered as median and extra-medial. The former following median abdominal incisions; the latter resulting mostly from operations for appendicitis.

An elliptical incision is made a little within the border of the opening in the abdominal wall. This must be done carefully, as there is frequently a loop of intestine adherent to the inner surface of the hernial sac. The skin and superficial fascia (if they can be distinguished) are then dissected back, exposing the sheath of the rectus muscle. On the outer side a similar dissection is made an inch or more over the external oblique. The edges of the opening are trimmed and a No. 25 silver wire suture is inserted at the upper angle of the opening by lifting the abdominal wall and passing the needle through the peritoneum, rectus muscle, and skin, about one inch from the free border of the opening. The needle on the other end of the wire is similarly passed through the abdominal wall on the opposite side. Silver wire sutures are inserted at intervals of one inch throughout the entire length of the incision. All the subcutaneous tissues are then united by a continuous kangaroo-tendon suture, and the skin is closed by a continuous suture of the same material.

The deep wire sutures are now taken up one by one, moving them back and forward, to make sure that a loop of gut is not included between the wire and the abdominal wall. The ends of the wire are wound around a piece of ivory on either side and drawn sufficiently tight to relieve the tension on the kangaroo-tendon stitches. This is the old and nearly obsolete "quill suture" used for a new purpose. Half the wires are removed in ten days, and the remainder in fifteen days. When the hernia is in the median line the principle is the same. The object is to relieve the tension on the stitches, which hold the muscular tissues together, until firm union has taken place. When the hernia is in the median line an elliptical incision is made around the tumor down to the sac, which is opened and the intestine returned to the abdominal cavity after removing all existing adhesions. The omentum, if present, is ligated and removed. The skin

and superficial fascia are dissected back on either side so as to expose the recti muscles. The retention sutures are then passed through the abdominal wall, including a good hold upon the recti muscles on either side.

1. The peritoneum and the deep aponeurosis are united with a continuous kangaroo tendon suture the entire length of the incision.

2. The recti muscles are stitched with kangaroo tendon in a similar manner; and finally, the skin is joined in the same manner with kangaroo tendon. The silver wire retention sutures are properly arranged as previously described.

Dr. Johnson before beginning the reading of his paper showed two cases upon which he had operated in 1898. One of them was a woman with an umbilical hernia complicated with a pendulous abdomen—an unfavorable case for operation. The mass of the hernia was as large as one's fist, and she was three months pregnant. She has had two births since the operation, but without any return of the hernia.

Dr. Johnson does not use a truss after his operations. He believes that it weakens the muscles, throws them apart and makes the opening worse.

The other case was that of a boy who had been operated on for right inguinal hernia. There was no sign of recurrence of the hernia, although a sufficiently long time had passed to demonstrate the success of a radical cure.

## SARCOMA OF THE DUODENUM.

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F. C. T., forty-three years old, has been employed as clerk for twenty-seven years. When thirty years old he had typhoid fever of mild course, but attended with internal hemorrhages. Since his recovery—for the last thirteen years—he has been every day at his occupation up to February twentieth-eighth, or a month before his death.

His mother died several years ago of some form of tubercular disease. January fifteenth I was called first to visit him. His symptoms were severe periodic pains in the left lumbar region, extending with less intensity through the umbilical region and ending as a fixed pain in the epigastric. I could detect also in this region a slight mass more tender than the surrounding tissues, quite well outlined, not dull but tympanitic by percussion. He told me he had been a sufferer from this pain since Christmas; was constipated, had acid regurgitation of gas, and frequent nausea in the morning; patient was anemic, and rather jaundiced; analysis of urine showed a copious quantity, with specific gravity 1017, no albumen. This specimen was sent me as the patient was busy at the store.

Six weeks later, February twenty-eighth, I was called again. Pains were less in the region of the stomach and it was more dilated, but in the kidney region very sharp, especially from six to twelve in the evening. More constipated, loss of appetite; infrequent vomiting; urine was free and contained no albumen. All symptoms of neph-

ritis, which I expected, were negative, with the exception of slight muscular twitchings.

About this time other members of the family became ill with influenza, having fever, headaches, pains, etc. During this time, my patient one day had a severe attack of headache, with slight delirium and quite a little temperature. These symptoms I thought due to the influenza infection, not finding any positive urinary disturbance. In a few days he was more comfortable and about the house, as the others were, and did not seem to me seriously diseased; said he felt able and expected to walk to the store next day, March nineteenth. That night, however, he had an attack of vomiting—dark in character, and probably blood. This led me to again examine carefully for a malignant growth, but the area of tenderness and rigidity was gone, probably not determined by reason of a dilated stomach. After this he became more dull,—the muscular twitching returned, and the constipation more obstinate, but the pain disappeared. The urine now for the first time showed a low specific gravity, 1002, and the faintest trace of albumen. There were probably casts, though no microscopical examination was made.

On the morning of the twenty-second he had an attack of vomiting of blood, while making my visit. It was dark, well-formed clots, quite smooth and two quarts or more in quantity. Doctors Graves and Anderson were now called in to advise. The kidney symptoms were pretty pronounced, but we were not so sure of the cause or region of the hemorrhage but concluded it was due to a gastric ulcer. He only had a slight attack after this, as food and medicine were given by rectum. From this time the catheter had to be used; though the quantity was large, the uremic symptoms of muscular twitching increased, but the apprehended convulsions never appeared. The stupor deepened,—respiration became slower, and death resulted suddenly March twenty-seventh.

An autopsy was held seventy-six hours after death; stomach normal, mucous membrane red and congested. Just below the pyloric orifice in the second part of the duodenum there was a thick, hard deposit or growth nearly constricting the gut, which was very adherent to the surrounding tissues, in which here and there were enlarged lymph-nodes. There was evidence of necrosis and hemorrhage on the inner surface, which was undoubtedly the seat of the hemorrhage.

The left kidney was greatly enlarged, four times the usual size, and everywhere adherent to its capsule. The right was not so large, but on section the cortex appeared broad and the interior disintegrated.

Specimens of this growth, with an enlarged gland from the neighboring tissues, together with a section of the left kidney, were sent to Professor C. J. Bartlett, of the Pathological Laboratory of Yale College, for microscopical examination. The report was as follows:

"An examination of the specimen sent me on March thirty-first gives the following results: The tumor is a malignant growth, sarcomatous in nature; the cells composing it being medium in size and large round-celled in shape. The enlarged lymph-nodes show the same growth. The kidneys show several things; first, they are very much congested in both the medullary and cortical portions; there is a nephritis with a certain amount of edema of the interstitial substance; also, there is considerable parenchymatous degeneration of the kidney cells. I did not find any secondary tumor nodules in the kidney substance."

I have reported this case because I find sarcoma of the duodenum very rare indeed. Inquiry at Johns Hopkins Hospital justifies me in this short statement from one of its physicians:

"In the Hospital we have had but three cases since its opening, and these not confined to the duodenum. In the literature, it is stated as extremely rare in the whole gut

(large and small). Most of the cases found are metastatic, a primary sarcoma of the intestine being unknown. Glandular involvement is not uncommon in sarcoma."

From Sajous I gather the fact, that among the records of about 18,000 autopsies at Guy's Hospital, there are reports of ten cases of primary malignant growth of the duodenum; four carcinomata, and six sarcomata. The growth extends by continuity and may thus give rise to the dilation and rigidity of the wall of the bowel. It also appears at an earlier age in life than malignant diseases elsewhere. Constitutional symptoms are likely to develop before local manifestations. The growths increase in size rapidly, and may undergo softening at the center. The disease is more rapid than carcinoma, generally terminating fatally in the course of six or eight months. Constitutional symptoms are the first to engage our attention, then local manifestations are apparent. History records that the temperature is often elevated, which is contrary to the case reported. Pain generally attends such growths, and with digestive derangements, together with vomiting, a tumor can be outlined. This fact is of course a material one, in differentiating the condition from ulcers or gall stones.

Sajous also publishes the following:

"The case, one of stricture below the ampullæ of Vater, caused by a small round-celled sarcomatous deposit located in second part of duodenum. The symptoms were, violent pain over the pyloric region, large and frequent vomitings, acid regurgitations, and pain in the head. The stomach was much dilated, the vomited matters containing much bile, and in the contents of the stomach were always found a notable quantity of hydrochloric acid and bile and non-digested food."

This case has several interesting features:

1. Its extreme rarity.
2. The comparatively early age of the patient with

two such formidable and fatal diseases existing at the same time.

3. The possibility of a person's continuing on at his employment to within a month of his death with only trivial symptoms to indicate such maladies.

4. The unusual and great size of the left kidney, which undoubtedly caused the most pain to the sufferer.

5. The existence of the duodenal growth causing so little disturbance.

6. The difficulty of diagnosing the exact location, and causes of the hemorrhage.

7. To note the association with these two diseases, a third, influenza with its army of symptoms, and to realize as I did that I was being baffled in all my efforts towards recovery.

8. To learn the duration of the growth, and whether in any way the kidney degeneration could have been secondary to it.

9. To be obliged to administer all nourishment by rectum, only to learn that little was retained, and that no other opportunity to use medicine presented.



## THE ULTIMATE RESULTS OF HYSTERECTOMY FOR CANCER.

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P. H. INGALLS, M.D.,

HARTFORD.

When I was asked by the President of the Society to prepare a short paper to be read at this meeting, I had just been through a discussion as to the ultimate results of hysterectomy. Statements have been made by men apparently well versed in this branch of surgery that the operation for cancer of the uterus is almost a useless proceeding, claiming that it is of no lasting benefit, and that sooner or later, a return occurs in all cases, and that the majority of all cases would live as long if let alone as if an operation was performed.

I hope by this paper to show that this reasoning is false, and that the operation while not giving the most brilliant results, is at least justifiable, and is the means of saving life and restoring to health many women who are by the nature of their disease doomed to a speedy death. I do not propose at this time to relate any tedious reports of cases, or to describe anything new in the way of operation, but I hope to place before you in a few words the present status of our position in regard to operation, just how much we are accomplishing by it, and to show the improvements that have been made in the past few years.

Some of you may remember that twelve years ago to-day, I read a paper on this subject which was the annual dissertation before our Society. At that time I made certain statements, and advanced certain theories, and it is a matter of a good deal of interest to look back

and review certain portions of that paper to see whether the statements have stood the test of time. In that paper I claimed that some relief was offered in cases of cancer of the uterus where the disease was evidently just beginning, and appeared as a small diseased patch occupying only a small portion of the cervix, and apparently having caused no involvement of the adjacent tissues. I claimed that in these cases much could be accomplished by removing the diseased structure and thoroughly canterizing the base from which the diseased tissue had been removed. This partial operation has not stood the test of time, and I think now it is worse than useless, and is a waste of time,—puts the patient through a needless operation, and accomplishes nothing, so I am perfectly willing to retract all that I said in its favor at that time. I also made the statement that in all cases where the disease had spread beyond the true uterine tissue, and had caused any involvement of the adjacent structures, that an operation offered no hope, and that any operation performed in cancerous tissue seemed more to aggravate the growth, and to increase the rapidity of the infection, and did not serve to prolong life in any way. I believe this still holds good, and that the majority of us who are operating in this field decline to operate in any cases where the diseased process has gone beyond true uterine tissue. I also called attention to Freund's operation, which was done by the abdominal route, and which he described in 1878, and which had had a mortality of seventy-five per cent. This operation has been abandoned.

At the time I wrote my paper there had been collected sixty-six cases of hysterectomy performed by American operators. Of these sixty-six, twenty-three were fatal as a result of the operation, forty-three recovered, and were living at periods varying from three months to three years, giving a mortality of 34.8-10 per cent. We then hoped that improved tech-

nique in operating, and more experience would do what it has always done in capital operations, lessen the mortality from the operation, and place it on a more scientific and favorable basis. Our hopes in this line have been realized, because from the latest statistics that I have been able to gather, the mortality from the operation itself has been reduced to 6.3-10 per cent.

It is not necessary at this time, nor is it the object of this paper to enter into any discussion of the technique of the operation, or to enter into any argument as to the relative merits of the clamp, ligature or cauterization or of the route whether vaginal, abdominal or combined. Certain facts in relation to the operation must always be borne in mind, certain fixed principles must be carried out, the principal of which are that the organ must be removed entirely, that the operation must be performed in a zone of healthy tissue, far removed from the infected structures, and pains must be taken not to infect the healthy tissue by the diseased, in the process of removal.

As the technique of our operations has improved, and as the operation has been more generally performed, and has narrowed itself down to the hands of a few operators of large experience, the statistics have rapidly improved. In some figures which have been published during this last year when the subject has been under discussion, I have been able to gather in one set of operations a report of one hundred and thirty-six cases. Of these cases there are thirty-four living at periods varying from five years to a few months of the operation. In another set of cases reported there were one hundred and twenty-six operations performed within two years. There were eight deaths from the operation; in forty-six cases the disease recurred; in thirty-six no report was obtainable, and thirty-one patients were living without any recurrence of the disease, the oldest case being two years old. Of course, from these figures we cannot make accurate calculations, but we can see how the mortality of the

operation itself has diminished, and what a large proportion of the patients are living at least two years after the operation with no recurrence of the disease reported. In my own cases operated upon within the last five years, of ten operations performed, two patients died from the operation, two died from recurrence within the first year, and one died from recurrence in eighteen months, two died at the end of two years, and three are still living, one being four and one-half years since the operation, and the last, one year, with no sign of recurrence up to the present time.

It must be borne in mind in all these cases that the majority of patients who are seen by the surgeons come too late for any operative work to be successfully attempted. Without knowing accurately the number of cases of cancer I have seen, from which I have picked the ten cases to operate on, I should say that of all the cases of cancer seen by me in consultation, less than five per cent, came sufficiently early to warrant even the advising of an operation.

What then are the ultimate results of operation for cancer of the uterus? We must admit that as a surgical procedure and as compared with other operations the results are to a certain extent disappointing, but with the figures which I have read to-day, with the mortality of the operation reduced from thirty-four per cent. to six per cent., are we not able to congratulate ourselves that we are doing some good work and are able to reclaim many women who if left alone would surely meet a fatal termination within at least eighteen months?

The various forms of cancer seem to act differently,—why, we are unable to determine,—but the clinical fact remains that cancer of the cervix seems to spread, and involve adjacent tissues much more rapidly than cancer of the body. Cancer of the body, however, is so apt to infect the ligaments and tubes on either side, and to involve the adjacent structures of the uterus that we are

never quite sure, in a hysterectomy, whether we have gotten entirely beyond the infected tissues, or not. This probably in a great measure accounts for the early return in many cases in which we expected to get more brilliant results.

The question naturally arises,—Is this to be the treatment of the future for cancer of the uterus? Dr. John Byrne, of Brooklyn, in several elaborately prepared articles written within the last four or five years has called the attention of the profession to his method of treating cancer of the cervix by means of the galvano-cautery knife, with which he dissects out all the diseased tissues, and then dry roasts all the tissue in sight after the removal of the infected portion. He claims that this operation, by an application of the intense heat of the galvano-cautery to these surfaces until they are thoroughly charred, absolutely destroys the structure of the cancer and thereby prevents its return at the site of the operation. We have heard hints and we have had some preliminary results from the work which is being carried on at the New York State Laboratory in Buffalo where they have been trying to isolate the germ of cancer and find some rational means of treating the disease exclusive of surgical operation. This work of course is absolutely in its infancy; nothing has been done as yet which seemed to offer anything tangible in the way of treatment, and whether they will ever reach a point whereby cancer can be treated by serum-therapy is one of the questions for the future. We will only be too willing and glad to accept anything which will offer any greater relief than the means which we have at our command. The Alexander treatment of which a great deal has been written, and on the use of which many statistics have been offered us, has been tried. My personal experience with it is small, and I am bound to confess that the results of my treatment by this method have been absolute failures in all respects. It is but fair, however, to

say that the author of this treatment only holds out inducements for its use in the fact that it has prevented the return after successful operations have been performed.

What conclusions then must we come to when we consider our present standing as regards hysterectomy for cancer of the uterus? In the first place every suspicious case should be examined with the greatest care. Any unusual bleeding from the body of the uterus should lead to a curettage, the scrapings examined carefully under a microscope, and if evidences of malignant disease are found, a hysterectomy should follow at once. A breaking down cervix can very easily be treated, a piece removed, submitted for microscopical examination, and the operation decided upon before it has gone too far. Operations to be at all effective must be performed early. Every portion of the diseased organ must be removed. The operation must be performed in healthy tissue. Operating in tissue already infected offers absolutely no hope. I feel sure that at the present time hysterectomy as unsatisfactory as its ultimate results are, offers us the greatest hope and is the best means known to us at the present time for the treatment of cancer of the uterus, and until some other more practical means are offered, it is still our duty to operate in cases where we safely can, because I feel that it is a fact that every case of cancer unoperated upon means death of the victim within two years.

## OBITUARIES.

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*For some we loved, the loveliest and the best  
That from his Vintage rolling Time hath prest,  
Have drunk their Cup a Round or two before,  
And one by one crept silently to rest.*

—THE RUBÁIYÁT.





EDWARD ROBINSON SQUIBB, M.D., BROOKLYN,  
N. Y.

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H. S. MILES, PH.G., M.D.,

BRIDGEPORT.

On October twenty-fifth, 1900, there passed away in the person of Dr. Edward R. Squibb, one of the foremost representatives of American Medicine and Pharmacy; death came suddenly at his home in Brooklyn.

Dr. Squibb was born in Wilmington, Del., July fourth, 1819. At the age of twenty-six he graduated from the Jefferson Medical College, Philadelphia.

The Mexican War was in progress and he was almost immediately appointed a Surgeon in the United States Navy and attached to a ship. At the close of the war he was transferred to the Brooklyn Navy Yard and placed in charge of the Medical Station there, where his knowledge was soon freely drawn upon in the preparation of medical supplies on a large scale, the Civil War breaking out shortly after his transfer. After a few years he resigned and started a private manufacturing laboratory in Brooklyn. This laboratory was three times destroyed by fire and in one of these fires, which occurred some thirty years ago, Dr. Squibb was severely burned by an explosion of ether.

In 1896 it became necessary to amputate his left hand because of some infection. Although a man of nearly seventy-seven, he took the matter very coolly, arranged all details and administered the ether with his own hand. He was a man of very positive convictions and great independence.

In January, 1892, his two sons were admitted to part-

nership and the firm name has since been E. R. Squibb & Sons, the sons being Dr. Edward H., and Charles F.

Dr. Squibb was married in 1825 to Miss Caroline F. L. Cook, of Philadelphia, and she with his two sons and one daughter survive him.

Dr. Squibb was a pioneer in the scientific manufacture of pharmaceutical preparations. He early recognized the importance of strict purity of all drugs and chemicals and by constant care and searching investigations probably did more than any other man to raise the standard of excellence and by his unique method of having no secrets of manufacture, gained the confidence and high respect of physicians and pharmacists throughout the country. With him everything must be brought to the highest state of perfection possible without regarding cost.

In 1858 Dr. Squibb joined the American Pharmaceutical Association and immediately took an active part in the deliberations of that body, contributing a paper of more than forty printed pages entitled "Notes and Suggestions Upon Some of the Processes of the United States Pharmacopoeia," which contained in outline his process for the manufacture of ether, spirits of nitrous ether, etc., and a plea for the introduction into the Pharmacopoeia of "that which relates to simple reliable tests of purity for its materials and products." He took the advanced position that there were in this country no other means of controlling the manufacture and sale of bad articles than by disseminating the means of critical scrutiny and discrimination through authoritative channels.

He was appointed a delegate from the New York Medical Society and the New York Academy of Medicine to the Convention for the Revision of the Pharmacopoeia for 1860; he was also elected a member of the Committee of Revision in 1870 and 1880, and during the revision of 1890 gave the Committee constant advice and assist-

ance, and even during the new revision continued to show deep interest in the work. Only nine days before his death he contributed an important voluntary paper on "Specific Gravity in General and the Specific Gravity of Alcohol in Particular."

He was probably the first American manufacturer to adopt the metric system of weights and measures.

Dr. Squibb had been an Honorary Member of the Connecticut Medical Society since our Centennial Meeting in 1892.

The writer will always remember with great pleasure his visits to the Squibb Laboratories while a student in pharmacy and the courteous and interesting way he explained to us all the processes of manufacture. He devised and perfected the method of re-percolation for procuring fluid extracts of exact strength and it may be said that there is not a class of preparations in pharmacy that has not been improved by his investigations. His contributions to chemistry have been numerous. One of the most important is the production of absolute alcohol, carried out with a nicety which has world-wide admiration and his methods and apparatus for the manufacture of ether of the highest purity and strength leave nothing to be desired in that connection. The good works of Dr. Squibb will live long, surgeons will remember him as having brought safety in their operations and physicians will always feel a satisfaction in the perfection of his preparations. His example should be followed by all who have to do with the preparation or administration of remedies for the relief of human ills.

ALEXANDER JOHNSTON CHALMERS SKENE,

M.D., LL.D.

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In the death of Dr. Skene on July 4, 1900, at the age of 62, American gynecology loses one of the last of its famous pioneers, and his city mourns for its greatest physician. He was born in Fyvie, Aberdeenshire, Scotland, June 17, 1838, of a family that has made its name known in Scotch history for nine centuries. His schooling was in Aberdeen and Kings College. He came to America at the age of 19, began the study of medicine three years later at Toronto, matriculated at the University of Michigan in 1861, and was graduated from the Long Island College Hospital in 1863. In that year and the following he served as acting assistant surgeon in the United States Volunteers at Port Royal, Charleston Harbor, and David's Island, prominent in plans for army ambulance work. He kept up his interest in military matters in the National Guard of the State as surgeon to the Twelfth Regiment and First Division, and as lieutenant-colonel on the staff of General Molineux (1884-5).

In 1864 Dr. Skene entered practice in Brooklyn, and within a year had begun his hospital and college work in obstetrics. Professor of both branches of gynecology at 31, he gave his best strength to the Long Island College Hospital, as teacher, as operator, and as dean and president (1886-1893), until the last year of his life. It was he who was most active in securing practical and beautiful plans giving adequate expression to the great Polhemus gift of a college and clinic building. The college owes its most famous alumnus a debt it can never pay.

Dr. Skene was professor of gynecology in the New York Post-Graduate Medical School, 1883-6, and consultant to various hospitals and dispensaries. He was one





of the founders of the American Gynecological Society and its tenth president (1886), and founder and honorary president of the International Congress of Gynecology and Obstetrics. He had been president of the Medical Society of Kings County, of the New York Obstetrical and of the Brooklyn Gynecological Society, and was a corresponding or honorary member of many foreign societies, such as those of Paris, Leipzig, Brussels, Edinburgh, London, etc. Aberdeen University conferred on him the degree of LL.D. in 1897.

His books are these: "Diseases of the Bladder and Urethra in Women," 1878 and 1887; "Treatise on Diseases of Women," 1888, 1892, and 1898; "Education and Culture as Related to the Health and Diseases of Women," 1889; "Medical Gynecology," 1895; and "Electro-Hemostasis in Operative Surgery," 1899.

Dr. Skene wrote from a large experience. For thirty-seven years there is hardly a twelvemonth without its paper, and many years show six. He wrote in the hours before breakfast, to avoid interruption, and in writing, as in teaching, his method was clinical, detailed, practical. His huge capacity for work was due to a magnificent physique—his chest girth was forty-four inches. His eye always twinkled with the memory of "last in class, first in field sports." Thus he was able to carry the burdens of college teaching, hospital operating, medical society duties, the large private sanitarium, and an extensive practice. Two days before he died sixty patients came to the office.

Dr. Skene married Annette Wilhelmine Lillian Van der Wegen, of Brussels, Belgium, who survives him. They had no children.

His country home was at Highmount, in the Catskills, where his love of the mountains had full scope, and where he could indulge his affection for animals. There he had more leisure for modelling. His life-size portraits

in marble are indeed noteworthy, in view of the scantiness of the time he could give to sculpture.

If one were to attempt an appreciation of Dr. Skene's work, one might select certain items, such as the insistence on gynecological and surgical methods in obstetric work (1877); the well-known observations on the urethral glands, a source of intractable trouble until recognized (1880); the many new instruments devised, the systematic hemostatic treatment of blood-vessels and pedicles by heat of moderate degree that dries and does not char (1897)—but these would be but examples of hundreds of worthy contributions swallowed up in the rapid sweep of surgical progress, the import and freshness of which, for their time, we who have benefited by them have little leisure to turn back to consider.

In him progressiveness and originality were balanced with caution and clear sense. Two instances will suffice. In the days when we planned to cure most pelvic pain by removing the ovaries, he was credited with timidity because of his careful restriction of this universal remedy. Again, he was said to be behind the times during the epidemic of vaginal hysterectomy. Yet the profession has come back to the conservatism from which he would not swerve.

Breadth of view was his. From the early days when he was Austin Flint's assistant, he studied his patient as an individual, and overlooked nothing in her general condition nor any detail of constitutional treatment. Such detailed care prepared the patient for operation (or saved her from it, often) and watched her throughout convalescence. His technique was so quiet and seemingly simple that only a brother surgeon appreciated its speed and thoroughness.

Few men concealed more generous deeds. Strong in his likes and dislikes, tenacious of purpose, keen of insight, full of apt anecdote, tactful, discreet, hopeful, inspiring, his impress was strong on those about him. In-



deed, throughout all his life runs this personality and force that makes greatness. Character escapes characterization. Personal magnetism eludes biographies. The impress of vigor and simplicity, the attraction of kindness and heartiness—these things may not be written. But the love and devotion he inspired follow after him.

He was elected an honorary member of the Connecticut Medical Society in 1894.

This sketch, with accompanying portrait of Dr. Skene, is furnished through the courtesy of the Publishing House of William Wood & Co., to whom thanks are hereby tendered.

ABNER S. WARNER, M.D., WETHERSFIELD.

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BY GURDON W. RUSSELL, M.D.,

HARTFORD.

Dr. Warner died at his home in Wethersfield, November two, 1900. He was born at Manlius, New York, September seventh, 1818, and was therefore a little over eighty-two years of age when he died. He graduated from Dartmouth College in 1842, and after teaching school for a few years, received his medical diploma from the Medical Department of the same institution in 1848. In the same year he went to Wethersfield and there commenced the practice of his profession, continuing in it until two years before his death. There was no specific cause for this, as I understand, save from a general failing in his physical powers.

It is a long period for one to continue in active business as a medical man and that too in the place in which he commenced it. It seems he was satisfied with his location, and the people were satisfied with him; it is an evidence of the esteem in which he was held by the community, and of the faithful manner in which he conducted his life in the town. The life of a country doctor is hard enough at the best, and especially for one who lives near to a large city, and who is liable to have his best efforts supplanted by his professional neighbors. While Dr. Warner must have recognized this, he was not the man to complain for matters which neither he, or his brethren could remedy, but accepted it with a grace which was naturally common to him, and consistent with his whole character. He possessed in a high degree that goodness of heart which thinketh no evil, and made him desirous to live in peace with all men. His general health was good, and had never been injured by excesses of any kind. I think he enjoyed his readings, both pro-

fessional and general, and his home also. His lot was cast in a river town when the traveling generally is comfortable, and the hardships from exposure are comparatively few, in striking contrast with some of our brethren who live among the mountains, or in thinly settled parts of the State.

My acquaintance with Dr. Warner commenced soon after his establishment in Wethersfield. I knew him in diverse ways for many years. He was pleasant, socially and professionally, a very agreeable man to meet, neither too dogmatic, or too reticent, saying what was necessary and proper to say, and then was content. In his consultations he was plain and direct, delivering his opinions with frankness and not with undue multiplication of words; he was very willing to believe that others might know something of very common things, without too much of tedious explanation. He was as well inclined as any of us to find out what was the matter with the patient, and then with little explanation endeavor to affect a cure. He stood well with his brethren, was in good regard in the town, faithful in his duties, honorable in his conduct, a modest Christian gentleman, deserving and receiving the respect of all.

For many years he was the physician at the State Prison, kind and just to the inmates. Once he was chosen to the General Assembly, and perhaps was glad to get back to his usual business again when it adjourned. Fortunately, the daily round of half a century does not become disagreeable to all of us. He served acceptably with the Sixteenth Regiment of Connecticut Volunteers, for over a year.

It is with some feeling of depression, that I close this short and imperfect sketch of Dr. Warner. He was the last, or nearly the last of that number who were in the profession, not very many years after myself. The remembrance of the friendship, the sweet counsel, the loving kindness of them all, will remain in my mind forever.

## MELANCTHON STORRS, M.D., HARTFORD.

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BY HENRY PUTNAM STEARNS, M.D.,

HARTFORD.

Dr. Melancthon Storrs died June ninth, 1900, at his residence on Ann Street, Hartford. May twenty-sixth he operated on a patient in Rockville for empyema. May thirty-first he operated on another patient in Berlin for the removal of a portion of the upper jaw. This operation was a somewhat protracted one, and he afterwards complained of feeling tired, an exceedingly rare expression for him. The next morning, June first, he awoke with a feeling of soreness and pain in the ball of the forefinger of his left hand, which even then had extended over the hand and some way up the arm.

He immediately sent for his kinsman, Dr. W. W. Knight, who diagnosed the case at once as one of blood-poisoning. The symptoms continued to develop rapidly, and before long he became unconscious at times. These periods increased in duration from day to day, and he passed away at an early hour of the morning of June ninth, in the seventh-seventh year of his age.

Storrs is a fine old English name, and carries with it wealth, both material and moral. It is said to be of Scandinavian or Teutonic origin, and in process of time has undergone, like many other English names, many transformations in its spelling. In Anglo-Saxon it is spelled *Stur* or *Stor*, and in English *Stor* and *Storr*, *Stores*, *Storres*, *Stoars*, *Storer*, and in several other ways. In Scotland it is spelled *Storer*, *Storrer*, *Storrier*, etc. The spelling, however, in the north of England, and especially in the shires of York and Nottingham, the homes of the Storrses, has been for some centuries *Storrs*, and

this spelling has come to designate special families. The other spellings have either gone out of use or have come to designate other families.

Dr. Melancthon Storrs was the fifth in descent from Samuel Storrs, who was of age when he came to this country from Nottinghamshire, England, in 1663, and settled at Barnstable, Massachusetts. In 1698 he moved with his family to Mansfield, Connecticut, and was one of the nine founders of that town, and exercised a decided influence in forming its early history. From that time to the present the town has had representatives of the Storrs family among its most highly prized citizens.

Joseph, son of Samuel, Jr., was the father of Rev. William Storrs, a noted clergyman settled at Westford, Connecticut, and who was the grandfather of the subject of this sketch.

It thus appears that Dr. Storrs was under bonds, as it were, to make good the record of a name which he could trace back through three or four centuries to ancestors who had held high positions in society, and to some of us who have seen something of the stress and serious earnestness of his daily life during the last forty years, it has seemed as if he lived in the constant realization, night and day, of this duty.

Dr. Storrs was born in Westford, formerly a part of Mansfield, Connecticut. His father, William Storrs, Jr., was a farmer and furniture manufacturer, and in this way was able to furnish for his son a somewhat wider field in which to develop his native tendencies, than could be had in simply doing such farm labor as was customary in those times. The manufacture of furniture was doubtless carried on in a primitive manner as compared with that in use at present. The articles made were largely hand-made and of plain designs. But this was just the kind of work to train the hand and muscles in the doing of things, and in accomplishing tasks. Moreover, it furnished the means of employment in rainy days

when the work on the farm was not practicable. It thereby tended to establish early habits of industry. While the sons of other farmers were left to wander about and have a good time in fishing the streams when the clouds were heavy, this oldest son of his father could be helping to provide the wherewithal to feed and clothe not only himself, but those other ten brothers and sisters. Such employment also tended to thoughtfulness and the development of such ingenuity as he might have in mechanical work. It also tended to develop confidence in himself, so that in process of time he was no longer content to be simply a pupil in the district school, but aspired to and attained the position of teacher. For several years he taught the district schools of Westford and the neighboring towns, boarding round, as was then the custom, from house to house. Some of these experiences which he has related to the writer, must have been exceedingly trying to a sensitive person, but he seems to have borne them with equanimity, and in the consciousness of development of mental strength.

These methods of employment continued for several years, and until he could no longer brook to follow on in the narrow sphere of life and labor into which he was born, but turned from it towards a higher calling and a broader field of service. He decided to study medicine.

I have made the above statements in reference to the early educational experiences of Dr. Storrs in bad form, if it should be inferred from them that he did not have an early training which was ever afterwards in life of great value to him as a physician. On the contrary, he thereby laid broad and deep foundations for physical health which is the basis for high success in that calling, and which enabled him to do with delight and ease his professional work, much of it of an exacting nature, until far beyond the age limit of work for most physicians.

Dr. Storrs began the study of medicine under the direction of Dr. F. L. Dickinson, late of Rockville, and

afterwards attended one course of lectures in the Medical Department of Harvard University. By that time he had reached the conclusion that it was important for him to take a more thorough preparatory course of study. He, therefore, for the time being relinquished medical studies and entered on a classical course, which enabled him to enter Brown University, where he remained two years, and then went to Yale, entering the Class of 1852, in the Junior year. After graduation he immediately resumed the study of medicine, and also taught for some time in the School for the Deaf and Dumb in New York City. He, however, found time to take a second course of lectures and to spend a part of the year at Yale, which enabled him to graduate in medicine in the latter part of 1853.

It was during this year that I became more fully acquainted with Dr. Storrs. Having decided to study medicine myself I took occasion to consult with him in relation to it. He at once manifested much interest in my decision and did not hesitate to advise me in regard to the best course, in his opinion, for me to pursue. These memories of now almost fifty years ago are still very vivid in my mind. He seemed to be in the full maturity of development, and at that time was nearly or quite thirty years of age. He used to speak even then as one with settled plans and definite opinions. He did not hesitate to advise me to go to Harvard for a course of study, and readily acceded to my plan of beginning study during the summer months as preliminary to entering the Tremont Street Private School, which was at that time conducted by some of the professors of Harvard University. His personal appearance was striking as a student. His forehead was high, his eye clear and full of expression, while he talked of the study and practice of medicine like one already in the profession. He impressed me then as one earnest, enthusiastic, and as without doubt as to his future success in his chosen profession.

Soon after he received his degree in medicine, he established himself at Colchester, Connecticut, where he remained in a country practice till 1861. During his residence at Colchester he appears to have very fully won the respect and confidence of those who had occasion to employ his services. The form of professional life while there seemed to be congenial to him, especially as it was rendered to a large proportion of a very intelligent community, and made it necessary for him to be much occupied in long rides through the country districts, and in this respect was in accord with the experiences of his early life at Westford.

In the autumn of 1861 he offered his services and received an appointment as surgeon of the Eighth Regiment, Connecticut Volunteers, under the command of Colonel, afterwards General Edward Harland, of Norwich. His experience, age, and education naturally qualified him for a sphere of extensive service as a surgeon. He had even then a special liking for surgery, and as the brigade with which he became connected was engaged in very active service, he had abundant opportunities for performing operations, both on the field and in hospitals. Such occasions were never neglected by Dr. Storrs, and his superior medical officers bear testimony to his efficiency and untiring devotion as a surgeon and physician.

Dr. Eli McClellan, a surgeon of the regular army in charge of the United States General Hospital at Fortress Monroe, in endorsing his orders, added the statement that "Dr. Storrs was the most efficient surgeon ever on duty at this hospital."

The Military and Civil History of Connecticut during the war says: "Of the Eighth Regiment sixty lay sick of fever at Morehead City, and nearly forty of typhoid fever. There were only two captains present for duty April twenty-first, and Surgeon Melanethon Storrs was the only well man of the field or staff officers, and it was



fortunate that he was an exception, for his skill and tireless devotion to the regiment rendered him of incalculable service."

Again: "He has shown himself diligent, quietly faithful, skillful, cool in battle, quick to see, and steady and calm in execution. He was often summoned from his regiment to positions requiring skill and reliability at corps and general hospitals. So manifest was his excellence that he was sent for a special purpose to Washington."

During the last year of his service in the army he was a staff surgeon, and it is said that during his whole four years of military service he was never enough unwell to be off duty a single day. Such a marvelous record in the discharge of duty during that period of trial in our country's history should never be forgotten in any statement concerning the life-work and character of Dr. Storrs, and I trust it may remain inscribed in the history of the Connecticut Medical Society, to the interests of which he was so strongly devoted.

Dr. Storrs left service in the army in July, 1865, having been in it nearly four years. Instead of returning to Colchester he came immediately to Hartford, settled here, and from that time till his death was rarely, if ever, absent from the city longer than a few days at a time, except when he visited Europe for the purpose of attending the International Medical Congress.

Regarding the technique and success of Dr. Storrs' surgical work during this period the writer is not qualified to speak. I do not recall having been present at a single major surgical operation by him with one exception in all these years. This was his first operation, I think, for ovariectomy, and occurred within the first year of his residence in Hartford. It is proper for me to add in explanation of my inability to speak from personal observation more fully of his record as a physician, that I have very rarely seen cases of any form of disease with

him. Therefore, whatever information I have regarding his equipment as a surgeon and physician has come mainly through the papers he has prepared during his very busy life, and from discussions by him in sessions of our medical societies, heard during the eight years of my professional life in Hartford prior to assuming the duties of my present position. There is, however, no question that long before he left us he had so far won the confidence of the community and that of his professional brethren in the State as to place him among its leading surgeons.

Owing to the fact that within a year after the close of the war several physicians, some of whom had relatives or friends resident in Hartford, established themselves here, it was not easy to secure a practice which would satisfy one who had led so active a life as Dr. Storrs had for several years, and it is probable that during the first few years he was not so fully occupied in his practice that he did not have leisure hours which would have hung heavily on the hands of anyone with less resources within himself. He, however, within a few months received an appointment as Medical Adviser of the Connecticut General Life Insurance Company. This position he held until his death. He not only proved to be a valuable medical adviser for the company, but in process of time so far demonstrated his business ability and sound judgment that he was elected a director, and in this position was hardly less highly regarded than he was as a medical adviser.

He was for many years a surgeon of the Hartford Hospital. He has been President of the Hartford Medical Society, and of the Connecticut Medical Society, and in 1892 was made President of the Section of Surgery at the Centennial Meeting of that Society. He was also a member of the American Medical Association, and of the American Association of Obstetricians and Gynecolog-

ists, and at the International Congress in 1887 was one of the Vice Presidents of the Surgical Section.

It should also be placed on record that Dr. Storrs rendered the medical profession of the State eminent service in what he did in connection with the "Medical Practice Bill," a few years ago. He was instant in season and out of season, and tireless in his efforts to secure this act of legislation. While it is not all which was desired by the profession, it was a step in the right direction, and places our Society on vantage ground towards securing higher educational qualifications for those who are to practice medicine and surgery in the State. It is proper further to add that the Hartford Medical Society had occasion to be under special obligation to Dr. Storrs for his great interest and service in the selection of a plan and in the erection of the Hunt Memorial Building.

Dr. Storrs was a person of marked individuality. This came in some measure from his abundant physical health. He was rarely ill; he never complained. He was always cheerful, and apparently full of a sense of well-being and hopefulness. If he ever experienced periods of depression they did not appear to those whom he met. If obstacles arose in his pathway toward attaining his desires, he immediately set about devising some plan to overcome them; and in doing this he had remarkable resources. If unable to obtain all that he desired, he readily accepted what he could get. He was always deeply in earnest. He never indulged in vacations. He literally lived in and by his work, and seemed to be refreshed and "lifted" after a successful surgical operation. Work agreed with him, and the more of it he had, the better pleased he seemed to be.

And this superabundance of physical strength continued to the last. As illustrative of it I may refer to a statement he made to me within the past year. He left Hartford on an afternoon train for Boston; then he took the night train for Portland, Maine, and thence to some

distant town in the interior of the State to visit his sister, who was ill. He returned in the afternoon to Boston and took a late train to Concord, N. H. He spent the remainder of the night and a part of the next day there. He returned to Boston and took night train for Hartford, appeared the next day as usual, and seemed to be in the best of spirits. Long after middle life he was accustomed to ride with horse and buggy to Colchester, Connecticut, a distance of thirty miles, in the night, and return after a rest of a few hours for his horse, and then finish his usual day's work in the city.

He rarely failed to be present at the meetings of the Hartford Medical Society, and was ever ready to contribute his part in the discussions. His characteristic appearance and discussions at our Society meetings will long be missed by his associates. He had positive convictions in reference to methods of procedure in nearly all medical and surgical matters, and did not hesitate to express them, and while his professional brethren did not always agree with him, they respected the courage of his convictions which was always manifest. The great interest and zeal he always showed in all that pertains to the advancement of the profession he so greatly loved was worthy of highest praise.

November twenty-ninth, 1853, he was married to Jane D., daughter of Rev. Charles S. Adams, of Westford, Connecticut. Four children, three sons and one daughter, were born to them, of whom three are now living.

Sources of information—Genealogy of the Storrs Family—Representative Men of Connecticut—Mrs. Gertrude S. Perkins, Dr. W. W. Knight.

MOSES CLARK WHITE, A.M., M.D., NEW HAVEN.

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C. J. BARTLETT, M.D.,

NEW HAVEN.

By the death of Professor Moses C. White, M.D., which occurred October twenty-fourth, 1900, the Connecticut Medical Society lost one of its oldest and most faithful members.

Dr. White was born in Paris, N. Y., July twenty-fourth, 1819, and was accordingly over eighty-one years old at the time of his death. His preliminary education was obtained at Cazenovia Seminary, Cazenovia, N. Y., after which he entered Wesleyan University, at Middletown, Conn., in February, 1842, and graduated third in rank in the class of 1845. The following two years he spent in New Haven, in theological and medical studies at Yale University, meanwhile preaching in New Haven and adjoining towns.

Having been ordained an Elder in the Methodist Episcopal Church, and soon after this appointed as a missionary to China, he sailed, together with his wife, from Boston on April fifteenth, 1847, going to Foo-Chow, and the years from 1847 to 1853 were spent in medical missionary work in that country. His experiences in those early days of Chinese missionary work were most varied and unusual, combining a large dispensary service with a private practice that covered a wide territory. During this time, he also published a translation of the Gospel of Matthew in the colloquial language of Foo-Chow, which is said to have been the first book ever published in that dialect. After seven months residence in China, Mrs. White died, and Dr. White's own health finally became so impaired that he was compelled to leave there in 1853, and he returned to New Haven. Soon after his return he published "An Introduction to the Study of the Colloquial Language of Foo-Chow." In 1851, before his

return from China, he was again married, his wife being Mary Seely of South Onandaga, N. Y.

Upon his return to this country, he again took up his medical studies at Yale, and graduated in medicine in 1854, then establishing himself in New Haven as a physician. He at once became interested in microscopy, and in 1857 was appointed Lecturer on Microscopy in the Medical Department of Yale University. Ten years later, he was advanced to the newly established professorship of Microscopy and Pathology in the same institution; and this position of Professor of Pathology he retained until a few months before his death, when he severed his active connection with the Medical School, and was made Professor Emeritus in the same subject.

Aside from his duties as a practicing physician, and as a teacher of medicine, Dr. White found time to act as an instructor in Botany in the Sheffield Scientific School from 1861 to 1864, and was also a lecturer on Vegetable and Animal History in Wesleyan University, his old alma mater, from 1869 to 1875. For many years, he was connected with the New Haven Hospital, as one of the attending physicians, and as pathologist, at the same time being a member of the Board of Directors of that institution. He was also Secretary of the Connecticut State Medical Society from 1864 to 1876, and President of the New Haven County Medical Association in 1880. Ever since the creation of the office of Microscopist of the New York Medico-Legal Society, that position had been filled by Dr. White.

From the establishment of the office of Medical Examiner, or Coroner's Physician, in Connecticut in 1883, until the time of his death, Dr. White held that position for the town of New Haven. His success in this office is perhaps best given in the words of the Coroner of New Haven County: "As Medical Examiner, he has been associated closely with me for the past seventeen years, during which time he has never wavered in the complete performance of his duties, rendering honest, capable, re-

liable, efficient, valued service. As Coroner of New Haven County, State of Connecticut, I have twenty-five Medical Examiners connected with the office. Dr. White was the peer of them all, the one to whom I went and of whose knowledge and counsel I availed myself."

Besides the publications already referred to, Dr. White assisted largely in the preparation of "Silliman's Physics," and wrote the chapter on Optics. He revised and edited the second edition of "Porter's Chemistry." For some years he has shown great interest in microphotography, and in the examination of blood-stains, not only by chemical means, but particularly by measurements of the red blood-corpuscles. This latter method he emphasized as of value in differentiating the blood of various animals. His publications in this line have been many and important, and he was recognized as an authority in the subject. More recently he has devoted much time to the perfecting and use of the projection microscope.

This incomplete outline of the life-work of Professor White may give some idea of the energy of the man and of his abilities in various directions. But only those who knew him best could rightly appreciate his true worth. He was so quiet, so unobtrusive in his manner, that a close acquaintance was necessary to really know the man. And such an acquaintance could not fail to show his uniform kindness to all, his remarkable enthusiasm which kept him to the very front in his work in microscopy, and a determination which kept him active almost to the day of death.

One of his long-time friends has well written of him, "Earnest in all his undertakings, of the highest integrity and uprightness of character, enjoying the respect and confidence of all with whom he was associated, his memory deserves to be honored by some pen that will thoughtfully, truthfully, and lovingly delineate the meritorious and estimable characteristics of Dr. White as they were known to those who knew him best."

GEORGE CYPRIAN JARVIS, M.A., M.D.,  
HARTFORD.

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HORACE S. FULLER, M.D.,

HARTFORD.

1834—1901.

Soon after the close of the Civil War, a number of physicians and surgeons, all of whom had done good service in the army and in the hospitals, and a few of whom had won distinction there, settled in Hartford for the purpose of pursuing the practice of medicine and surgery. Among the most promising of these, both on account of his war record and his high social connections in Connecticut, was George Cyprian Jarvis.

He was young and enthusiastic, had unusual qualifications, a rare experience, and a presence which would suggest a professional gentleman.

He was tall, straight, had a good head, a keen, pleasant eye, courteous manners, which won the confidence of all who became acquainted with him.

Dr. Jarvis was of noble lineage. The name Jarvis has been famous both in this country and in Europe. It has furnished leaders at the bar, it has graced the pulpit, it has elevated the profession of medicine and surgery, it has enriched art, and performed deeds of daring upon the ocean and on the battlefield. It is recorded that the family took its name from Jean Gervais, who lived in Normandy, about the end of the fourteenth century. Some of his descendants following the fortunes of William the Conqueror, went to England where they acquired estates, and later the more adventurous of these came to this country and settled in Virginia and Massachusetts.



The grandfather of the subject of this sketch was John Jarvis, of New Canaan, Conn., who married Elizabeth Boutelle, and his father was George Oglevie Jarvis, born in that town July fourteenth, 1795; who studied medicine with his father-in-law, Dr. Truman S. Wetmore, of Winchester. He married Miss Philamela Marshall, and settled in Torrington; later removed to Colebrook, and afterwards to Portland, where he won high distinction in his profession. George C. Jarvis, his youngest son, was born at Colebrook, April twenty-fourth, 1834. After studying in the public schools in his native place until he was fifteen years of age, he spent one year at the military academy at Norwich, Vermont, and commenced the study of Latin and Greek, preparatory to entering Trinity College in 1851, where he remained only through the junior year. In order to fit him the better for his professional work he took special courses in chemistry and biology under Prof. Johnson of Wesleyan University, and still further pursued his studies in chemistry under Prof. J. Ogden Doremus, of New York. His well-known familiarity with materia medica and pharmacy was acquired from his three years' experience as a druggist. With this preparation he commenced the study of medicine and surgery under his father, where he had most excellent opportunities for observation and practice. He then studied gynecology under Dr. J. Marion Sims, of New York City, and matriculating in the medical department of the University of New York, was graduated as Doctor of Medicine in March, 1861.

These were the stirring times at the beginning of the Civil War, and though he had already commenced practice at Stamford, he could not resist the appeal of his country for men who were skilled in caring for those who were fighting for the Union.

In December, 1861, Dr. Jarvis was commissioned Assistant Surgeon of the First Battalion Connecticut Cav-

ally, at which time he took the field with this command. In October, 1862, he was promoted to be Surgeon of the Seventh Regiment of Infantry, Connecticut Volunteers, and was later placed on General Terry's staff as Surgeon-in-Chief. Through a large part of the war he was Chief Operating Surgeon of the First Division of the Tenth Army Corps. He accompanied the expedition against Fort Fisher. Here his skill and endurance were put to the severest test; for two days and a half he worked at the amputating table, with only short intervals of rest, performing some of the most difficult operations known at that time to surgery. The success of these operations placed him among the leading surgeons in the field.

At Wilmington, N. C., the responsibility of receiving and caring for the sick, wounded and starved Union soldiers from Andersonville, Raleigh and other Southern prisons, was placed upon him as Surgeon-in-Charge.

One can imagine the difficulty and danger of his task, when he recalls the fact that some twenty thousand men, wrecks of humanity, came under his care, suffering from the gravest type of typhus, or prison fever; that eleven of the twelve surgeons who were under him fell victims to the disease, seven of whom died, while the others were invalids. It is stated that the average death-rate of the enlisted men was twenty a day. Amid all these difficulties he did not spare himself, but labored untiringly until he had placed upon transports all that were able to be sent to Northern hospitals, and rendered the necessary assistance to those who were too feeble to be removed. He then turned his attention to the sanitary condition of the city of Wilmington, and so improved it that he was highly complimented by his superior officers. It is pleasing to record the fact that the officer in command at this time was Gen. Joseph R. Hawley (now United States Senator), who heartily co-operated with him in all his labor and was ever after his most sincere and devoted friend.

During the siege of Morris Island in 1863 he showed his courage and devotion to the cause by volunteering to accompany the command in a midnight assault on Fort Wagner and Fort Gregg. He was with General Seymour in the terrible battle of Olustee in Florida. He went through the campaign in West Virginia. He participated in a number of battles under General Butler, in all of which except that at Bermuda Hundred, General Grant was in command of operations. "Dr. Jarvis had an eye that pierced through the shams and make-believes of the shirkers, but he had a kind word and cheery smile for the poor sick and wounded fellows who came under his care, he was a favorite with all the boys." Having served faithfully and with distinction through the war, he was honorably mustered out July twentieth, 1865, when he returned to his home, and soon afterwards settled in Hartford, where he rapidly gained friends and an extensive practice, and was soon recognized as one of the foremost men in his profession. His intellect and skill won for him the confidence of his brethren, and he was often called in consultation not only in his own city but in other parts of the State.

Dr. Jarvis was appointed examining surgeon for pensions in 1869, and upon the reorganization of the Board he became the President, which position he held until 1884, when he resigned. For six years he was a member of the Examining Board for conferring medical degrees at Yale College. He was visiting surgeon at the Hartford Hospital from 1870 to 1899, after which he was a member of the Consulting Board until his death. For several years he had a private hospital where some of his most difficult operations were performed. He was a member of the Hartford Medical Society; of the Hartford County Medical Association, of which he was President in 1896-'97; of the Connecticut Medical Society, to which he was chosen a Fellow in 1871 and 1872. This Association several years ago appointed Dr. Jarvis one of a

committee of three to secure the establishment of a Board of Health in Connecticut. Being so fully occupied with his professional duties he was not a frequent contributor to medical literature, but when he presented a paper it showed originality of thought and was the result of experience. However on account of his high professional standing his "Alma Mater" conferred upon him the honorary degree of "Master of Arts."

We have already noticed the distinguished teachers, as well as his illustrious father under whom Dr. Jarvis had pursued his medical studies, and to this he had added a remarkable army experience. He had a strong mind, great powers of observation, and in his early practice was a good student of medicine. In later years when his time was fully occupied by his extended practice, and still later when enfeebled by disease he kept in touch with the advances in the science of medicine by calling around him bright young men, fresh from the medical centers of instruction. "Friction of mind with mind strengthens and improves every one." He had the rare faculty of drawing from them the facts and methods which were most to his purpose. Endowed with quick perception, and a keen insight into the changes which are produced by disease, he was a good diagnostician.

As a surgeon he was bold, quick in decision and ready in execution, and yet he was conservative in his operations, believing it was better to save everything that could be restored; he lived at a time when many new operations were attempted and was a pioneer in some of the most noted ones of the last third of a century. How well do we recall that familiar trio of surgeons, so long associated together, Wainwright, Storrs and Jarvis,—Wainwright methodical and finished, Storrs, thoughtful, ingenious and resourceful, Jarvis, brilliant and original; all too soon and untimely they have followed each other.

As a consultant, Dr. Jarvis always had an independent opinion, and though courteous was ready to urge his

ideas of treatment which were often original; he was ever ready in his command of medicines, and thoroughly believed in the efficacy of those which he used. He devised a number of formulæ which became very popular and were again and again called for by his patients. In failing health and through suffering he pursued his much-loved profession when most men would have felt that they must retire from a life which required so much sacrifice. How he accepted all this, only those nearest to him can know; nothing is more touching than the breaking down of such a body and mind. The influence of Dr. Jarvis upon his patients was something extraordinary; they thoroughly trusted him, his dictum became their law. When depressed, his encouraging words inspired them to new efforts, and with that hope which results in help. How many can say his death was to them the loss of a personal friend.

Dr. Jarvis was an intense lover of nature and found his recreation in out-door life. The familiar haunts of birds, the lakes and streams abounding in fish were well known to him; he followed them through the States, and even penetrated the wilds of Canada to pursue his much loved sports. When no longer able to go on foot he paddled the Restigouche River in his boat for miles amidst the most enchanting scenery, and for hours sat whipping the stream for his favorite salmon, which when landed gave him the keenest delight. He always returned from these sojourns with renewed enthusiasm and improved health.

The army recollections of Dr. Jarvis were very dear to him. Nothing was more pleasing than the visit of some comrade, and the talk of their exploits and their narrow escapes. He was fond of his friends and they were warmly attached to him. One can never forget his pleasant, social visits enlivened, as they were by agreeable conversation. His knowledge extended

through a wide range of subjects. He delighted in music, talked intelligently of paintings and etchings, had a fine conception of what was artistic and beautiful. His home life was exceptionally happy; he leaves a wife and one daughter, the wife of Dr. Charles R. Taft, of this city, and three grand-children.

If any of our younger associates think that our words of praise have been too lavish let him be reminded that his acquaintance with Dr. Jarvis was when he was wasted with disease and was suffering with pain.

"Behold—not him we know!  
This was the prison which his soul looked through,  
Tender, and brave, and true."

DR. ELBRIDGE KNOWLTON LEONARD,  
ROCKVILLE.

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E. P. FLINT, M.D.,

ROCKVILLE.

Dr. Elbridge Knowlton Leonard was born at Stafford, November, 1833.

He attended the common schools of his native town and being an apt scholar, as well as omniverous reader, acquired, not only an unusual proficiency in the various school studies, but an invaluable store of general knowledge and a mental discipline that served him well as a foundation for the efficiency which he ultimately achieved in his chosen profession.

He became a student at the Westfield, Mass., Academy and on leaving that institution, entered upon the study of medicine, which he pursued for three years under Dr. Marshall Calkin at Monson, Mass.

He then entered a Philadelphia Medical College, completed the course and graduated, and later attended a full course of lectures at the Medical Department of Yale.

After practicing at West Stafford for two years he was induced by the earnest solicitation of some of the prominent citizens of Windsor to locate at Broad Brook in that town.

From that time his success as a practitioner and his place as a worthy and trusted citizen were assured.

His careful judgment and conscientious attention in educational and other local interests, rendered him an indispensable factor in public affairs. He was elected to the Legislature and also was Town Clerk and Treasurer several years.

He removed to Rockville in 1879, thus avoiding much of the fatigue attendant upon a widely diffused practice, and procuring better school facilities for his sons.

In his new field he quickly won the confidence of the people by his marked professional skill, while his pleasant, gentlemanly mien, and quiet dignity won it as a citizen and friend as well.

As a practitioner Dr. Leonard exhibited a rare conscientiousness in the discharge of his duties to his patients. The gravity and responsibility of his work seemed ever present with him and he often called upon his professional brothers to counsel in serious cases. In turn his advice and counsel were freely sought by neighboring physicians and accepted by them and their patrons as being well worthy of reliance.

He was a progressive physician in the best sense, conservative in the adoption of new theories and remedies. He was among the first to accept and put to practical use whatever had survived the test of thorough experiment by those who possessed the requisite facilities and experience.

He possessed unusual skill as a surgeon, did many minor operations but avoided, intentionally, the more difficult surgical work.

His interest in the progress of modern medicine and surgery never abated. He subscribed for and read some of the best medical journals and continued to purchase new medical and surgical works up to the last year of his life.

He never was absent from a meeting of the County Medical Society unless detained by the demands of his patients, and was always ready, quietly but freely, to contribute from his store of medical knowledge and experience.

His great-hearted benevolence was proverbial, and many of limited means testify to his generosity in faithful professional care in their times of need.



He married Marietta P. Anderson, also of Stafford, and his home-life was the powerful magnet that attracted him. When not engaged by the duties of his profession he could always be found within his pleasant home. His wife and two sons survive him.

An only daughter fell a victim, at the age of eleven, to that dread enemy of childhood, tubercular meningitis.

Dr. Leonard, naturally was possessed of vigorous frame and robust constitution, but a few years ago a severe illness left him with impaired heart action. After a period of professional work which overtaxed his strength, he was attacked with facial erysipelas, which running its course in one week, subsided. But the weakened heart did not permit of rallying strength, and he expired of heart paralysis, suddenly, June thirteenth, 1900.

A numerous concourse filled to overflowing the home, and many felt that they had come to witness the last sad rites of not only a physician, but a friend.

JULIAN NEWELL PARKER, M.D., SOUTH  
MANCHESTER.

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WILLIAM R. TINKER, M.D.,

SOUTH MANCHESTER.

Dr. Julian Newell Parker was born at Mansfield, July third, 1839, and died at South Manchester, February seventh, 1901. His father, Charles Parker, was an active, energetic farmer, from whom he inherited that fine physique and unbounded energy which were to last him through life. In his boyhood days he attended the public schools of Mansfield and later the Connecticut Literary Institute at Suffield. Like many of our young men of limited means, but unlimited ambition, he taught school that he might further develop himself and obtain means to secure a medical education, which had been the great ambition of his young life.

In 1862 Governor Buckingham issued orders for recruiting the Twenty-first Regiment, Connecticut Volunteers. Dr. Parker was one of the first to enlist in Company D, which came from Mansfield. He went out as private, but soon was promoted to assistant surgeon, when he had an opportunity to begin his life work. He was a hard student and whenever opportunity offered him a few hours he was always to be found with some medical work. The history of the Twenty-first is too well known to need any comment.

After leaving the United States service the young surgeon went to New Haven and entered the office of Dr. Townsend. He also matriculated in the Medical Department of Yale, from which he was graduated in 1867. He went to Europe on one of the large steamers as surgeon, and continued his studies in the hospitals of

France for about one year. He then returned to his former home in Mansfield where he associated himself with Dr. Norman Brigham, with whom he practiced for one year. Afterwards he took up practice in Mansfield by himself and continued it until 1872, when he removed to South Manchester. There he resided and practiced until his death, February seventh, 1901. In 1868 Dr. Parker married Caroline Shepard, of New Haven, who survives him. They had no children.

Dr. Parker was a man of fine physique, manly in his bearing, with a noble, intelligent face that inspired confidence in his patients. It was about the year 1876 that he first felt the attack of that slow, lingering disease, progressive muscular atrophy, that was surely to take from him his power of locomotion and much of his ability to make him self-useful to his fellow men. But his courage did not fail him and with his usual determination he attacked the disease. There is no doubt that by his persistence and that never-give-up that was born in him he delayed its fatal termination for many years. But it was a fight to the finish, with only one possible termination—his death. Yet how manfully he fought! Never complaining, never impatient, but always the same; always ready to listen to other people's complaints, never to complain.

Dr. Parker always kept well informed upon everything that pertained to his chosen profession and in the last few years of his life, when he had to give up visiting patients at their homes, he had a large general office practice and was ever glad to give good counsel to the younger men who were taking up his life work.

For many years he had made a specialty of electricity and his office equipment for electrical treatment was one of the most complete in New England. Patients came to him not only from the nearby cities and towns, but also from places more remote. He was a man of great ability and had it not been for the disease that was so

long sapping his life and possibilities he would have reached a prominence that any man might well be proud of. He was a man of good judgment, strong character and high honor and in his work never promised much when he felt he could accomplish but little. He did not have great confidence in medicine but was always ready to try the new and glad to find anything that gave him greater power to combat disease. He had the confidence and respect of his fellow practitioners and the people of the whole community where he lived.

Dr. Parker at one time was surgeon of the First Regiment, C. N. G., but was obliged to resign on account of his impaired health. He was for many years Medical Examiner for the County Coroner. He was a member of Drake Post, G. A. R., and held the position of Post Surgeon during the entire period of his residence in Manchester. When a young man he joined the Mansfield Lodge of Masons and retained his membership in that Lodge until his death. His townsmen all miss him, and none more than the members of the profession which he loved so well.

## EMORY HAWKINS DAVIS, M.D., OF PLAINFIELD.

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BY CHARLES JAMES FOX, M.D.,

WILLIMANTIC.

Emory Hawkins Davis, M.D., suddenly passed from earthly life Friday, March fifteenth, at his late residence in Plainfield, of cerebral apoplexy, aged fifty-six years.

It now remains for the writer, who was intimately acquainted with him for a quarter of a century, professionally and as a close friend, to endeavor in a slight degree to perpetuate his memory by this short tribute to his worth.

Doctor Davis was descended from New York and Rhode Island ancestry and was born February eleventh, 1845, in Winfield, Herkimer County, New York, and was a son of Jeremiah and Amy (Bennett) Davis. His father was a well-known temperance advocate who had lectured extensively in New York State. The doctor's early life was on a farm until he was old enough to attend the district and common schools, where he attained high proficiency in the common English branches. Being then inclined to study medicine he entered the office of Doctor Frank S. Burgess of Moosup, Conn., in 1869, and then matriculated with the medical department of the University at Burlington, Vermont, where he graduated in the class of 1872, and immediately located at Plainfield, Conn. Here for twenty-nine years he practiced uninterruptedly his chosen profession, building up a large and lucrative clientage. His practice extended over a large area of territory. Doctor Davis was a member and Ex-President of the Windham County Medical Society, a

member of the Connecticut State Society and American Medical Association, and has frequently been elected "Fellow" to the State Society, and a delegate to other State Medical Associations. At the time of his decease he was one of the Censors of this Association. He was Post Surgeon for the town of Plainfield, and was one of the Windham County Board of United States Examining Surgeons during President Harrison's and President McKinley's administrations. Doctor Davis was endowed with traits that are most commendable. He was generous, whole-souled, of an even happy temperament, the most genial and most companionable of anyone the writer has ever met. He was noted for his charming personality and happy smiles on all social occasions. We can all bear witness that he was the life of our medical meetings whenever he attended; and he was generally present. His special trait was to either hear, or tell a good story, for really he was the best of story tellers. He always had one ready for any social occasion. His ever ready wit and good humor, combined with that keen repartee, made him popular and his friends legion. He was an epicure and enjoyed always a good dinner whether as a host or as a guest. His elegant menus and generous hospitality have given him a very wide reputation as the "Prince of Entertainers." He had always a high sense of humor. He loved nature in all that was beautiful and was passionately fond of the arts, vocal and instrumental music and flowers. He was an enthusiast on sports of all kinds. Another rare attribute was his excellent taste as shown in "Davis Villa" and its surroundings. The spacious and well-kept lawns without, the modern improvements within, all exemplified a unique accomplishment of his being. In his town he was always on the right side, an advocate always of good roads and all public improvements. In politics he was always a loyal working Republican and enthusiastically

upheld the principles of his party. The writer would like to describe more fully the natural personality as well as the individuality of Doctor Davis, but words and language fail to express these choice attributes of his worth. He was also a worthy member of the Masonic order, the Odd Fellows and the Patrons of Husbandry. In all these social organizations he was deeply interested. The medical reputation of Doctor Davis was built upon a foundation of solidity. To accomplish the greatest good in the daily practice of his profession was the passion of his life. No one ever sought his aid in vain; rich or poor, misery in rags, or disease in tapestry, he went to all to comfort all and if possible to relieve all. In whatever household he was summoned as a physician he left it as a dear and confidential friend. Did a patient alarmed without cause need encouragement, his ever-present genial smile carried at once the sunshine of hope into that patient's heart and put all whims to flight. He was not a believer of creeds or denominations of any kind, but sincerely adopted and boldly advocated the philosophy of spiritualism. In the beautiful language of one of his speakers at his funeral all of us unite in the thought, how sweetly serenely he lived, how his life shone with brightness for all.

His funeral was most impressively conducted by the Rev. Dr. S. H. Howe of Norwich, and Rev. H. T. Arnold of Plainfield, on Monday, March eighteen, 1901, at 1 o'clock from his late residence in Plainfield, six members from the Windham County Medical Society and six from Protection Lodge of Odd Fellows acting as bearers. The body was viewed by hundreds of sorrow-stricken friends with tear-dimmed eyes, who gathered to pay their last token of respect to their friend and physician. They included the young and the old, to whom he had often given wise counsel and ministrations, the rich, in whom they had found a faithful physician, and the poor and

humble, into whose homes it had many times been his delight to bring sweet comfort and sunshine.

The floral emblems were artistic and most beautiful, the music was impressive and the singing deeply pathetic and touching to every heart, all being fully carried out in accordance with the wishes expressed by the deceased. The interment was in Cedarville, New York.

“His life was gentle, and the elements so mixed in him, that nature might stand up and say to all the world, This was a man.”



## EDWARD THOMAS CORNWALL, M.D., CHESHIRE.

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GUSTAVUS ELIOT, M.D.,

NEW HAVEN.

Edward Thomas Cornwall, only son of Thomas E. and Mary E. (Rice) Cornwall, was born in Cheshire, September twenty-second, 1858. He was the great-grandson of Dr. Thomas T. Cornwall, who practiced medicine for many years in Cheshire, and who was a member of the New Haven County Medical Association from 1786 to 1809.

His preparatory education was obtained at the Episcopal Academy of Connecticut, in Cheshire, and at the Abbott School, in Hartford.

In 1877 he commenced the study of medicine at the College of Physicians and Surgeons, in the City of New York, and was for two years a private student of Dr. Henry B. Sands, at that time the professor of anatomy. He received the degree of doctor of medicine in 1881, the subject of his graduation thesis being "The History and Cause of Diphtheria."

He commenced practice in Meriden, but about two years later removed to Cheshire, where he continued to reside during the remainder of his life. For two years his health had not been good, and he had traveled extensively with the hope of gaining increased strength and vigor, but after an illness of three weeks with pneumonia, he died at his home on August eighth, 1899.

He was married, on September seventh, 1881, to Miss Sarah A. Morse, who still lives, with their two sons, in Cheshire. His mother and sister reside in California.

Dr. Cornwall was actively interested in public affairs.

He was a member of the Congregational Church, and was also a Mason and an Odd Fellow. For several years he was a member of the Board of Education. In 1885 he represented the town of Cheshire in the House of Representatives of the Connecticut Legislature.

He was a man of attractive personality and indomitable energy. For over fifteen years he devoted himself unsparingly to the exactions of an extensive practice and was regarded with unusual affection and confidence by the large number of families and individuals, who sought his aid in the battle with disease.

## WILLIS EDWARD WEED, M.D., RIDGEFIELD.

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H. S. MILES, M.D.,

BRIDGEPORT.

Dr. Willis Edward Weed was born at New Canaan, July ninth, 1862, and died at his residence in Ridgefield on February third, 1901.

Dr. Weed received his preliminary education in Bridgeport, to which place his parents had removed while he was a young boy. After graduating from the High School he attended the College of Physicians and Surgeons, New York, and obtained his degree in 1883. His preceptor was Dr. Francis J. Young of Bridgeport.

He began practice in West Cornwall, remaining about two years, then removed to Ridgefield, where he lived until his death.

In addition to the duties of his profession Dr. Weed always took a most active interest in all the affairs of the town. He was Health Officer of Ridgefield for eleven years and his annual reports showed his watchful care and thorough work in connection with this most important position. He was a most valued member of the School Board for two years.

Dr. Weed was a Mason and an Odd Fellow and had filled all the offices of these orders in Ridgefield.

He was a member of the Danbury Medical Association, as well as of our State Society.

On September twenty-third, 1884, he married Miss Minnie F. Stillman of Bridgeport, who, with one son and two daughters, survives him.

The doctor had been in poor health for several years, but by exercising prudence he was able to attend to his professional duties until within three months of his death.

No one could have been more devoted to his profession or to his home and family, and all who knew him feel deeply the loss of a good physician and a good friend.



MEDICAL LEGISLATION.



## MEDICAL LEGISLATION.

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The following enactments of the General Assembly of 1901, which affect directly the physicians of this State, have been received in time for publication in the Proceedings, through the efforts of the Chairman of the Committee on Legislation:

### AN ACT CONCERNING THE PRACTICE OF MEDICINE, SURGERY, AND MIDWIFERY.

SECTION 1. Section eight of chapter CLVII of the Public Acts of 1893 is hereby amended to read as follows: The said examining committees shall hold three regular examinations in each year, as follows: one on the second Tuesday of March, one on the second Tuesday of July, and one on the second Tuesday of November, at such places as they may designate, and such additional meetings and at such places as they shall determine. Applicants to practice medicine or surgery shall be examined in anatomy, physiology, medical chemistry, obstetrics, hygiene, surgery, pathology, diagnosis, and therapeutics, including practice and materia medica. Each committee shall frame its own questions and conduct its examinations in writing, and both questions and answers shall be placed on file with the State Board of Health. Each applicant shall have the right to choose which of the three committees shall be the one by whom he shall be examined; but before taking such examination he shall pay to the committee the sum of fifteen dollars, provided, however, that the fee for examination in midwifery alone shall be ten dollars. An applicant, after having been rejected by any of said examining committees, shall not be eligible to examination by another committee of examination until after the expiration of twelve months.

SEC. 2. Section one of chapter CLXXXVII of the Public Acts of 1897 is hereby amended by adding at the end of the section the following: "And no person shall be eligible to said examination until he presents evidence to the examining committee by whom he is to be examined, satisfactory to said committee, that he has received a diploma from some legally incorporated medical college," so that it shall read as follows: No person, after the passage of this act, shall obtain or receive a certificate of registration as required by the provisions of chapter CLVIII of the Public Acts of 1893, until he has passed a satisfactory examination before one of the examining committees appointed for the purpose under the provisions of said act, nor until he has complied with the other requirements of said act; and no person shall be eligible to said examination until he presents evidence to the examining committee by whom he is to be examined, satisfactory to said committee, that he has received a diploma from some legally incorporated medical college.

SEC. 3. The Secretary of the State Board of Health, upon the written request of all of the members of any of the examining committees provided for by chapter CLVIII of the Public Acts of 1893, shall have authority to revoke and cancel the certificate of registration of any person convicted of any crime in the practice of his professional business, or convicted of a felony, provided, however, that no one of the examining committees shall have the right to request the revocation and cancellation of a certificate granted upon the examination of any of the other examining committees.

Approved, June 11, 1901.

#### AN ACT CONCERNING THE PRACTICE OF MEDICINE, SURGERY, AND MIDWIFERY.

Any of the examining committees provided for in section seven of chapter CLVIII of the Public Acts of 1893,



shall, when requested by an applicant for a certificate permitting said applicant to practice midwifery, if said applicant does not understand the English language, conduct the examination through an interpreter of the language which the applicant understands. Said interpreter shall be furnished and paid by the applicant, and shall furnish the committee conducting the examination satisfactory proof of his ability correctly to translate the language of the applicant into English. Whenever such applicant shall have satisfactorily passed an examination so conducted, a certificate of registration shall be issued as provided in said act.

Approved, May 29, 1901.

#### AN ACT MAKING AN APPROPRIATION FOR THE ERECTION OF A HOSPITAL FOR THE TREAT- MENT OF PULMONARY TUBERCULOSIS.

The sum of twenty-five thousand dollars is hereby appropriated to the Hartford Hospital for the erection of an experimental hospital for the treatment of pulmonary tuberculosis in accordance with plans to be filed in the office of the Comptroller. State patients shall be admitted to and receive treatment in said hospital, when erected, for the sum of four dollars per week.

#### AN ACT CONCERNING THE PRACTICE OF OSTEOPATHY.

SECTION 1. The Governor shall appoint on or before the first day of July, 1901, and biennially thereafter, three persons who shall constitute a State Board of Osteopathic Registration and Examination, who shall hold their office for two years from the first day of July in the year of their respective appointments and until their successors shall have been appointed and qualified.

SEC. 2. The members of said Board shall be resident osteopathic physicians of good standing in their profession and graduates of legally chartered colleges of osteopathy.

SEC. 3. Said Board shall appoint one of its number to be its recorder, whose duty it shall be to keep a record of the official proceedings of said Board, and copies of said record certified by him shall be legal evidence.

SEC. 4. On request of said Board, the 'Comptroller shall provide a suitable room in the Capitol for its meetings.

SEC. 5. Said Board shall meet at the Capitol on the first Tuesday of March and September in each year, and at such other times as a majority of the Board shall appoint. At any meeting of said Board, a majority of the members thereof shall constitute a quorum.

SEC. 6. Said Board shall create no expense exceeding the sum received from time to time as fees as hereinafter provided.

SEC. 7. Said Board shall make such rules of procedure for the regulation of all matters of application and hearing before it as it may deem advisable.

SEC. 8. No person shall engage in the practice of osteopathy in this State after the first day of October, 1901, unless such person shall have first obtained from the said Board a license therefor.

SEC. 9. All applications for such license shall be in writing and signed by the applicant, upon blanks furnished by the said Board, setting forth such facts concerning the applicant as said Board shall require, and no license shall be granted to any person unless he shall have received a certificate of graduation from some reputable college of osteopathy, duly recognized by the laws of the state wherein the same is situated, or unless he shall have spent as pupil or assistant at least two years under the instruction and direction of some reputable practitioner of osteopathy, or unless he shall have been actually engaged in the practice of osteopathy in this State at the time of the passage of this act.

SEC. 10. Any person, who, at the time of the passage of this act, shall be actually engaged in the practice of osteopathy in this State, shall be entitled to receive such license upon making application to the Board as provided in section nine of this act and paying a fee of two dollars.

SEC. 11. Any person, who, subsequent to the passage of this act, shall desire to commence the practice of osteopathy in this State, shall make application to the Board as provided in section nine of this act. Upon the receipt of such application, the said Board shall require the applicant to submit to an examination as to his qualifications for such practice, which examination shall include the subjects of anatomy, physiology, pathology, and the principles and practice of osteopathy. If such examination shall be passed to the satisfaction of the Board, the Board shall issue its license to the said applicant. A license, however, may be granted without such examination to any person who has been in active and continuous practice of osteopathy for three successive years in any other State, who shall satisfy the Board as to his fitness to engage in such practice.

SEC. 12. Except as provided in section ten of this act, every person applying for a license shall at the time of his application pay to the recorder twenty-five dollars, and, if said applicant shall fail to obtain his license, twenty dollars shall be returned to him.

SEC. 13. The Board may refuse to grant a license to any person guilty of a felony, or addicted to any vice to such a degree as to render him unfit to practice osteopathy; and may, after notice and hearing, revoke the license of any person convicted of a felony.

SEC. 14. The recorder shall keep an account of all moneys received by him, and shall annually before the tenth of November of each year render an account thereof to the Comptroller; and shall pay from the moneys

received the expenses for necessary books and stationery for the use of said Board and the necessary traveling expenses of the members of said Board.

SEC. 15. The license provided for in section eight of this act shall not authorize the holder thereof to prescribe or use drugs in his practice, nor to perform surgical operations. Osteopathic physicians shall be subject to the same rules and regulations that govern other physicians in the making and filing of certificates of death, in the control of contagious diseases, and other matters pertaining to public health.

SEC. 16. Any person who shall engage in the practice of osteopathy in violation of the provisions of this act shall be guilty of a misdemeanor, and shall be fined not less than twenty-five dollars nor more than one hundred dollars for each offense.

SEC. 17. Nothing in this act shall be construed as prohibiting any legally authorized practitioner of medicine or surgery in this State from the practice of his profession as guaranteed him by the statutes of this State.

SEC. 18. This act shall take effect from its passage.

Approved, June 17, 1901.

## WINDHAM COUNTY MEDICAL ASSOCIATION.

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### RESOLUTIONS.

WHEREAS, Tuberculosis is a contagious and communicable disease, and

WHEREAS, Incipient pulmonary tuberculosis is many times a curable disease, and

WHEREAS, Pulmonary tuberculosis untreated and neglected becomes a source of danger to the community, and

WHEREAS, Tuberculosis occurring in patients unable to seek climatic or distant sanatorial advantages can best be treated and often cured in properly located and arranged local sanatoria, and

WHEREAS, A bill is now before the Connecticut Legislature to found such a State hospital for incipient tuberculosis; therefore, be it

Resolved, That the Windham County Medical Society hereby supports and urges the passage with such modification as may seem best, of the bill known as "An act to establish a State hospital in some suitable location for the treatment of incipient pulmonary tuberculosis and making an appropriation of \$100,000.00."

Resolved, That a copy of these resolutions be presented to members of the State Legislature and be given to the Windham County papers for publication.

The foregoing resolutions were unanimously voted at the annual meeting of the Windham County Medical Society held in Putnam, April 11, 1901.

Attest:

JAS. L. GARDNER, M.D.,  
Clerk.

## MEMBERS OF THE SOCIETY.

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### HONORARY MEMBERS.

ANDREW JACOB FULLER,	Bath, Me.
ARTHUR WARD,	Newark N. J.
ADRIAN THEO. WOODWARD,	Brandon, Vt.
WILLIAM McCOLLOM,	Brooklyn, N. Y.
SAMUEL THOMAS HUBBARD,	New York City.
AGRIPPA NELSON BELL,	Brooklyn, N. Y.
JOHN SHAW BILLINGS, U. S. A.,	New York City.
THOMAS ADDIS EMMETT,	New York City.
EDWIN MOTT MOORE,	Rochester, N. Y.
WILLIAM HENRY WELCH,	Baltimore, Md.
ROBERT FULTON WEIR,	New York City.
SIR JOSEPH LISTER,	London, Eng.
EDWARD G. JANEWAY,	New York City.
HON. CHARLES E. GROSS,	Hartford, Conn.
DAVID WEBSTER,	New York City.
SIR JAMES GRANT,	Ottawa, Can.
HENRY O. MARCY,	Boston, Mass.
T. MITCHELL PRUDDEN,	New York City.
WILLIAM W. KEEN,	Philadelphia.
T. GAILLARD THOMAS,	New York City.
JAMES W. McLANE,	New York City.
FREDERICK HOLME WIGGIN,	New York City.
SENECA D. POWELL,	New York City.
J. W. S. GOULEY,	New York City.

## ACTIVE MEMBERS.

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*The names of those who have been Presidents are in capitals.*

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### HARTFORD COUNTY.

GEORGE CLARY, M.D., New Britain, President.

NATHAN MAYER, M.D., Hartford, Vice President.

WILLIAM G. CRAIG, M.D., Farmington, Clerk.

*County Reporter*—JOHN D. GRIGGS, M.D.,

*Censors*—HOWARD O. ALLEN, M.D., PHILLO W. STREET, M.D.,

CHARLES D. ALTON, M.D.

Annual Meeting Third Wednesday in April. Semi-Annual Meeting  
Third Wednesday in October.

### HARTFORD:

GURDON W. RUSSELL, No. 207 Farmington Avenue.

HENRY P. STEARNS, No. 190 Retreat Avenue.

Horace S. Fuller, No. 95 Trumbull Street.

John O'Flaherty, No. 406 Main Street.

Nathan Mayer, No. 712 Main Street.

William M. Hudson, No. 105 Elm Street.

David Crary, No. 1074 Main Street.

John B. Lewis, No. 56 Prospect Street.

Daniel T. Bromley, No. 121 Pearl Street.

Gustavus P. Davis, No. 56 Prospect Street.

Charles E. Froelich, No. 103 Pratt Street.

Harmon G. Howe, No. 137 High Street.

William T. Bacon, No. 11 Pratt Street.

William W. Knight, No. 96 Trumbull Street.

Thomas D. Crothers, No. 50 Fairfield Avenue.

George L. Parmele, No. 65 Pratt Street.

Ellen H. Gladwin, No. 705 Asylum Avenue.

Samuel B. St. John, No. 68 Pratt Street.

George R. Shepherd, No. 32 Farmington Avenue.

Fredrick S. Crossfield, No. 75 Pratt Street.

Marcus M. Johnson, No. 92 Pearl Street.

William D. Morgan, No. 49 Pearl Street.

John F. Axtelle, No. 635 Main Street.

George K. Welch, No. 103 Pratt Street.

Phineas H. Ingalls, No. 112 High Street.

Edward K. Root, No. 49 Pearl Street.

Luther A. Davison, No. 11 Pratt Street.

John Howard, No. 119 Trumbull Street.

Charles D. Alton, No. 86 Farmington Avenue.

Oliver C. Smith, No. 44 High Street.

Joseph E. Root, No. 67 Pearl Street.

William Porter, Jr., No. 391 Allyn Street.

Frederick T. Simpson, No. 122 High Street.

George R. Miller, No. 189 High Street.

Charles C. Beach, No. 535 Trumbull Street.

Gideon C. Segur, No. 67 Farmington Avenue.

George C. Bailey, No. 65 Church Street.  
 Alva E. Abrams, No. 78 High Street.  
 Charles E. Taft, No. 2 Garden Street.  
 Thomas F. Kane, No. 517 Main Street.  
 Arthur J. Wolff, No. 1 Spring Street.  
 Ansel G. Cook, No. 340 Farmington Avenue.  
 Edwin A. Down, No. 703 Asylum Street.  
 Daniel F. Sullivan, No. 64 Church Street.  
 Joseph H. Cahill, No. 51 Church Street.  
 Everett J. McKnight, No. 110 High street.  
 Benjamin S. Barrows, No. 78 High Street.  
 Michael A. Bailey, No. 65 Church Street.  
 George N. Bell, No. 44 High Street.  
 Frank L. Waite, No. 68 Pratt Street.  
 \*Charles S. Stern, No. 904 Main Street.  
 Oliver K. Isham, No. 211 High Street.  
 Franklin L. Lawton, No. 295 Main Street.  
 John H. Rose, No. 75 Pratt Street.  
 John B. Waters, No. 103 Trumbull Street.  
 Joseph B. Hall, No. 75 Pratt Street.  
 Edward O. Elmer, No. 813 Park Street.  
 Janet M. Weir, No. 43 May Street.  
 John F. Dowling, No. 124 Main Street.  
 \*Phillip D. Bunce, No. 50 Pratt Street. U. S. A.  
 Homer L. Law, No. 100 Washington Street.  
 Wilton E. Dickerman, No. 51 Pratt Street.  
 John B. Boucher, No. 25 Charter Oak Avenue.  
 Levi B. Cochran, No. 43 Farmington Avenue.  
 James H. Naylor, No. 153 Main Street.  
 Charles P. Botsford, No. 1393 Main Street.  
 James H. Standish, No. 378 Windsor Avenue.  
 Michael H. Gill, No. 397 Capitol Avenue.  
 John E. McCook, No. 390 Main Street.  
 John W. Felty, No. 340 Windsor Avenue.  
 George E. Sleeper, No. 1333 Main Street.  
 Frank B. Look, No. 104 Church Street.  
 Frank S. Snow, No. 98 High Street.  
 Howard F. Smith, No. 926 Main Street.  
 Thomas W. Chester, No. 110 High Street.  
 Joseph A. Kilbourn, No. 771 Park Street.  
 Phillip P. Carlon, No. 21 1-2 Church Street.  
 \*William G. Craig, No. 11 Pratt Street. U. S. A.  
 William S. Reoch, No. 70 Church Street.  
 Thomas E. Enders, No. 3, Highland Street.  
 Charles A. Goodrich, No. 5 Haynes Street.  
 Alfred M. Rowley, No. 143 Main Street.  
 Irving DeL. Blanchard, No. 241 Main Street.  
 Emil G. Reinert, No. 553 Main Street.  
 Arthur D. Hayes, No. 18 Spring Street.  
 Herman A. Tyler, Jr., No. 641 Main Street.  
 Frederick L. McKee, No. 153 Ashley Street.

## AVON :

John L. North.

Arthur S. Brackett.

## BERLIN :

Robert E. Ensign.  
Charles A. Gillin.

## CANTON - Collinsville:

George F. Lewis.  
Ida R. Gridley-Case.  
William H. Crowley.  
Paul Plummer.

## East Berlin:

George W. Lawrence.

## EAST HARTFORD :

## BRISTOL :

John J. Wilson.  
William W. Horton.Edward H. Griswold.  
Thomas S. O'Connell.  
Walter G. Murphy.

\*Exempted from taxation.



Burnside:	Franklin H. Mayberry.	Michael J. Coholan.
EAST WINDSOR--Broad Brook :	Howard O. Allen.	George J. Holmes.
Warehouse Point:	Michael J. Kelly.	Lawrence M. Cremin.
	George E. Porter.	Wilbur P. Bunnell.
ENFIELD :	Rial Strickland.	Samuel W. Irving.
Thompsonville:	Edward F. Parsons.	Robert M. Clark.
	George T. Finch.	Hermann Strosser.
	Henry G. Varno.	Arvid Anderson.
	Thomas F. Reardon.	Harris L. Paige.
Hazardville:	Simon W. Houghton.	Kenneth E. Kellogg.
GRANBY :	Rollin B. Chatfield.	PLAINVILLE :
FARMINGTON :	Franklin Wheeler.	John N. Bull.
	Charles Carrington.	Theodore G. Wright.
	John B. Griggs.	ROCKY HILL :
GLASTONBURY :	*Henry C. Bunce.	*Rufus W. Griswold.
	Charles G. Rankin.	SIMSBURY--Tariffville :
	William S. Kingsbury.	Charles M. Wooster.
South Glastonbury:	Henry M. Rising.	SOUTHINGTON :
	Harry E. Rising.	Willard G. Steadman.
MANCHESTER :	Francis H. Whiton.	SOUTH WINDSOR :
	John T. Dooley.	Mary S. Tudor.
South Manchester:	William R. Tinker.	Henry A. Deane.
	Thomas H. Weldon.	SUFFIELD :
NEW BRITAIN :	*George Clary.	Jarvis K. Mason.
	Edwin B. Lyon.	Matthew T. Newton.
	Jay S. Stone.	Philo W. Street.
	Erastus P. Swasey.	West Suffield:
		William E. Caldwell.
		WETHERSFIELD :
		Edward G. Fox.
		Arthur W. Howard.
		WINDSOR :
		*Samuel A. Wilson.
		Newton S. Bell.
		WINDSOR LOCKS :
		Sidney R. Burnap.
		Joseph A. Coogan.
		William J. Coyle.

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## NEW HAVEN COUNTY.

HENRY L. SWAIN, M.D., New Haven, President.

FRANK B. TUTTLE, M.D., Naugatuck, Vice President.

JOSEPH H. TOWNSEND, M.D., New Haven, Clerk.

*County Reporter*—E. W. SMITH, M.D., Meriden.*Censors*—F. H. WHEELER, M.D., J. W. SEAVER, M.D.,

C. E. MUNGER, M.D.

Annual Meeting, third Thursday in April; semi-annual, third Thursday in October.

## NEW HAVEN:

S. G. Hubbard, No. 23 College Street.

C. A. LINDSLEY, No. 15 Elm Street.

John Nicoll, No. 96 Broadway.

\*Exempted from taxation.

- T. H. Bishop, No. 215 Church Street.  
 FRANCIS BACON, No. 32 High Street.  
 W. L. Bradley, No. 426 Orange Street.  
 A. E. Winchell, No. 60 Pearl Street.  
 Robert S. Ives, No. 339 Temple Street.  
 Evelyn L. Bissell, No. 308 Crown Street.  
 Arthur Ruickoldt, No. 71 Olive Street.  
 Walter Judson, No. 1145 Chapel Street.  
 Frederick Bellosa, No. 209 Orange Street.  
 S. D. Gilbert, No. 27 Wall Street.  
 S. H. Chapman, No. 193 Church Street.  
 J. P. C. Foster, No. 109 College Street.  
 W. H. Carmalt, No. 87 Elm Street.  
 T. H. Russell, No. 137 Elm Street.  
 F. H. Whittemore, No. 13 Elm Street.  
 C. P. Lindsley, No. 37 Elm Street.  
 H. Fleischner, No. 928 Grand Avenue.  
 M. Mailhouse, No. 151 Meadow Street.  
 M. C. O'Connor, No. 882 State Street.  
 Charles E. Park, No. 132 Olive Street.  
 F. E. Beckwith, No. 139 Church street.  
 Gustavus Eliot, No. 139 Church Street.  
 J. E. Stetson, No. 106 High Street.  
 J. F. Luby, No. 667 Grand Avenue.  
 William W. Hawkes, No. 35 High Street.  
 Frank H. Wheeler, No. 221 Crown Street.  
 Herbert E. Smith, Medical College.  
 Benjamin L. Lambert, No. 358 Howard Avenue.  
 F. W. Wright, No. 48 Pearl Street.  
 Edward K. Roberts, No. 244 Grand Avenue.  
 Oliver T. Osborne, No. 252 York Street.  
 Lucy C. Peckham, No. 115 Green Street.  
 William G. Daggett, No. 189 Church Street.  
 Louis S. DeForest, No. 335 Orange Street.  
 Henry L. Swain, No. 232 York Street.  
 Mary B. Moody, Sherland Avenue, cor. E. Grand Avenue.  
 G. F. Converse, junction Whalley Avenue and Goffe Street.  
 \*J. H. Townsend, No. 39 College Street.  
 T. M. Cahill, No. 36 Elm Street.  
 C. J. Foote, No. 26 Elm Street.  
 Marvin Smith, No. 73 Pearl Street.  
 S. J. Maher, No. 212 Orange Street.  
 Jay W. Seaver, No. 25 Lynwood Street.  
 Louis B. Bishop, No. 77 Whitney Avenue.  
 H. W. Ring, No. 46 Elm Street.  
 W. C. Welch, No. 44 College Street.  
 A. O. Barihault, No. 528 Chapel Street.  
 Rollin McNeil, No. 149 Bradley Street.  
 Edward M. McCabe, No. 224 Orange Street.  
 James M. Reilly, No. 337 Cedar Street.  
 Clarence E. Skinner, No. 67 Grove Street.  
 N. R. Hotchkiss, No. 150 Shelton Avenue.  
 Benjamin A. Cheney, No. 40 Elm Street.  
 Charles A. Tuttle, No. 129 Whalley Avenue.  
 Harry B. Ferris, No. 118 York Street.  
 Edmund S. Thomson, No. 352 Grand Avenue.  
 Henry F. Klenke, No. 730 Grand Avenue.  
 Leonard W. Bacon, Jr., No. 294 Elm Street.  
 Paul S. Robinson, No. 164 Grand Avenue.  
 Arthur N. Alling, No. 199 York Street.  
 A. W. Evans, No. 2 Hillhouse Avenue.  
 R. A. McDonnell, No. 1142 Chapel Street.

\*Exempted from taxation.

E. P. Pitman, No. 524 Howard Avenue.  
 James A. Moore, No. 223 Grand Avenue.  
 Isaac N. Porter, No. 198 Dixwell Avenue.  
 Ernest H. Arnold, No. 46 York Square.  
 Robert E. Peck, No. 56 Howe Street.  
 Daniel A. Jones, No. 746 Chapel Street.  
 William C. Wurttemberg, No. 42 Elm Street.  
 Chauncey S. Lamb, No. 10 Park Street.  
 Edward S. Moulton, No. 223 York Street.  
 Frederick N. Sperry, No. 76 Wooster Street.  
 William F. Verdi, No. 172 St. John Street.  
 Charles J. Bartlett, Medical College.  
 Morris D. Slattery, No. 352 Howard Avenue.  
 Ward H. Sanford, No. 39 Edwards Street.  
 William M. Kenna, No. 145 Olive Street.  
 Ambrose K. Brennan, No. 179 Franklin Street.  
 Ralph S. Goodwin, Jr., No. 1179 Chapel Street.  
 Leonard L. Sanford, No. 216 Crown Street.  
 Willis H. Crowe, No. 106 Whalley Avenue.  
 Archibald McNeil, No. 51 Livingstone Street.  
 Charles H. Robbins, No. 329 Grand Avenue.  
 Louis M. Gompertz, No. 39 Wooster Place.  
 Alfred G. Nadler, No. 122 Olive Street.  
 T. E. Beard, Jr., No. 163 Wooster Street.  
 William Sprenger, No. 366 George Street.  
 Joseph B. Monahan, No. 228 Congress Avenue.  
 Frederick C. Bishop, No. 1223 Chapel Street.  
 James H. J. Flynn, No. 426 Howard Avenue.  
 Frank A. Kirby, No. 235 Dixwell Avenue.  
 Charles D. Phelps, No. 40 Trumbull Street.  
 William J. Sheahan, No. 383 Howard Avenue.  
 Clifford W. Kellog, No. 233 York Street.  
 John F. Sullivan, No. 304 Exchange Street.  
 John S. Ely, No. 60 Wall Street.  
 Peter F. Metz, No. 279 Crown Street.  
 Donald R. Hinckley, No. 35 College Street.  
 Maximilian L. Loeb, No. 74 York Street.  
 Edward F. McIntosh, No. 192 York Street.  
 Nicola Mariani.  
 Samuel M. Hammond.  
 George I. Hemingway.  
 Bernard E. Henrehan, No. 603 Dixwell Avenue.  
 James S. Maher.  
 Percy D. Littlejohn.  
 A. W. Marsh, No. 1012 Whalley Avenue.  
 William N. Winne, No. 1002 Whalley Avenue.  
 Charles H. Gardner.  
 William S. Barnes.  
 Irwin Grannis.  
 Clarence C. Kilbourn.  
 Theodore D. Pallman.  
 Gilbert T. McMaster.

## ANSONIA :

Louis E. Cooper.  
 Louis H. Wilmot.

## BRANFORD :

C. W. Gaylord.  
 A. J. Tenny.  
 George H. Townsend.

## DERBY :

F. N. Loomis.  
 Elmer T. Sharpe.  
 Edward A. Haire.

## EAST HAVEN :

Charles W. Holbrook.

## GUILFORD :

George H. Beebe.

## HAMDEN—Whitneyville :

Henry H. Smith.

## MADISON :

\*D. M. Webb.

\*Exempted from taxation.

## MERIDEN :

\*Asa H. Churchill.  
 C. H. S. Davis.  
 N. Nickerson.  
 A. W. Tracy.  
 E. T. Bradstreet.  
 J. D. Eggleston.  
 Edward W. Smith.  
 O. J. D. Hughes,  
 Ava H. Fenn.  
 E. W. Pierce.  
 S. D. Otis.  
 F. P. Griswold.  
 E. D. Hall.  
 H. W. Delesdernier.  
 H. A. Mecks.  
 William Galvin.  
 J. W. H. La Pointe.  
 Joseph A. Cooke.

## MILFORD :

E. B. Heady.  
 E. C. Beach.  
 A. L. Tuttle.

## NAUGATUCK :

Frank B. Tuttle.  
 Thomas M. Bull.  
 Frederick Spring.  
 James W. Robbins.  
 William J. Delaney.  
 Edwin H. Johnson.  
 Frank J. Tuttle.

## NORTH HAVEN :

R. B. Goodyear.

## ORANGE—West Haven.

J. F. Barnett.  
 William V. Wilson.  
 Durell Shepard.

## OXFORD :

\*Lewis Barnes.

## SEYMOUR :

Frank A. Benedict.  
 Elias W. Davis.

## WALLINGFORD :

J. D. McGaughey.  
 C. H. Atwater.  
 William S. Russell.  
 William P. Wilson.  
 Caroline North.

## WATERBURY :

Edward L. Griggs.  
 F. E. Castle.  
 E. W. McDonald.  
 Walter L. Barber.  
 C. W. S. Frost.  
 Charles S. Rodman.  
 J. M. Benedict.  
 Thomas L. Axtelle.  
 Carl E. Munger.  
 Bernard A. O'Hara.  
 John F. Hayes.  
 Caroline R. Conkey.  
 Augustin A. Crane.  
 Patrick T. O'Connor.  
 John D. Frency.  
 Charles A. Hamilton.  
 George O. Robbins.  
 Isaac P. Fiske.  
 Charles H. Brown.  
 Edward W. Goodenough.  
 Myron L. Cooley.  
 Frederick G. Graves.  
 John R. Poore.  
 James L. Moriarty.  
 Daniel L. Maloney.  
 Thomas J. Kilmartin.  
 Ernest D. Chipman.  
 Charles A. Monegan.  
 Henry G. Anderson.  
 Henry E. Hungerford.  
 Charles A. Ryder.

## Waterville:

Joseph S. Holroyd.

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## NEW LONDON COUNTY.

CHARLES B. GRAVES, M.D., New London, President.

NEWTON P. SMITH, M.D., Norwich, Vice President.

CARLISLE S. FERRIN, M.D., New London, Clerk.

*Censors*—L. S. PADDOCK, M.D., WILLIAM WITTER, M.D.,

F. N. BRAMAN, M.D.

Annual Meeting, first Thursday in April; semi-annual, first Thursday in October.

## COLCHESTER :

James T. Mitchell.  
 Raymond R. Gandy.

## EAST LYME—Niantic :

Frederick H. Dart.  
 Edward C. Chipman.

\*Exempted from taxation.

GRISWOLD—Jewett City :	Edward P. Brewer.
George H. Jennings.	Newton P. Smith.
GROTON :	Patrick H. Harriman.
Edmund P. Douglass.	Witter K. Tingley.
Frank W. Hewes.	William T. Browne.
MONTVILLE—Uncasville :	George R. Harris.
Morton E. Fox.	Rush W. Kimball.
NEW LONDON :	James J. Donahue.
Abiel W. Nelson.	Harvey E. Higgins.
FRANCIS N. BRAMAN.	Taftville:
John G. Stanton.	George Thompson.
Charles B. Graves.	Yantic :
Joseph R. Crofton.	Herbert H. Howe.
Hiram B. Thomson.	STONINGTON :
Harold H. Heyer.	Charles E. Brayton.
*Carlisle F. Ferrin.	George D. Stanton.
Thomas W. Rogers.	Norman L. Drake.
J. Clifton Taylor.	Mystic:
Griswold Bragaw.	Frank A. Coates.
Patrick J. Cassidy.	A. M. Purdy.
Harry M. Lee.	Old Mystic:
NORWICH :	*Albert T. Chapman.
Lewis S. Paddock.	William H. Gray.
William Witter.	VOLUNTOWN :
William S. C. Perkins.	Warren Russell Davis.
Patrick Cassidy.	WATERFORD :
LEONARD B. ALMY.	George M. Minor.
Anthony Peck.	
Julian LaPierre.	

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## FAIRFIELD COUNTY.

FRANKLIN P. CLARK, M.D., Danbury, President.

N. E. WORDIN, M.D., Bridgeport, Vice President.

GEORGE S. FORD, M.D., Bridgeport, Clerk.

*County Reporter*—J. MURRAY JOHNSON, M.D., Bridgeport.*Censors*—J. C. LYNCH, M.D., W. E. RICE, M.D.,

L. T. DAY, M.D.

Annual Meeting, second Tuesday in April, at Bridgeport; semi-annual  
in October.

## BRIDGEPORT:

Andrew J. Smith, No. 191 Barnum Avenue.

GEORGE L. PORTER, No. 372 State Street.

Robert Lauder, No. 310 Fairfield Avenue.

Curtis H. Bill, No. 411 State Street.

N. E. Wordin, No. 274 Fairfield Avenue.

F. M. Wilson, Nos. 834-836 Myrtle Avenue.

T. F. Martin, No. 289 Golden Hill Street.

F. B. Downs, No. 906 Lafayette Street.

J. W. Wright, Nos. 808-810-812 Myrtle Avenue.

A. W. Lyons, 991 Broad Street.

\*A. A. Holmes, No. 991 Broad Street.

Charles C. Godfrey, No. 340 State Street.

S. M. Garlick, No. 474 State Street.

Henry Blodget, No. 477 State Street.

\*Exempted from taxation.

J. C. Lynch, No. 408 State Street.  
 C. C. Hoyt, No. 1289 State Street.  
 G. W. Osborn, No. 888 Broad Street.  
 J. R. Topping, No. 295 East Main Street.  
 B. F. White, No. 390 State Street.  
 Jacob May, No. 124 Courtland Street.  
 F. C. Graves, No. 561 State Street.  
 G. B. Cowell, No. 502 East Washington Avenue.  
 C. N. Haskell, No. 257 State Street.  
 George E. Ober, No. 355 East Main Street.  
 B. DeF. Sheedy, No. 426 State Street.  
 D. C. DeWolfe, No. 509 Fairfield Avenue.  
 Harry S. Miles, No. 417 State Street.  
 Charles L. Banks, No. 400 State Street.  
 Fessenden L. Day, No. 477 State Street.  
 Edward Fitzgerald, No. 526 East Washington Avenue.  
 \*George S. Ford, No. 313 State Street.  
 Robert G. Leverty, No. 570 Washington Avenue.  
 Frank M. Tukey, No. 429 State Street.  
 William W. Gray, No. 346 West Avenue.  
 James D. Gold, No. 866 Lafayette Street.  
 Reuben A. Lockhart, No. 18 North Washington Avenue.  
 Harriet A. Thompson, No. 695 Warren Street.  
 Frederick J. Adams, No. 327 Fairfield Avenue.  
 W. J. A. O'Hara, No. 361 Barnum Avenue.  
 David M. Trecartin, No. 542 State Street.  
 G. Stanley Heft, No. 356 State Street.  
 \*Michael M. Rowe, No. 1532 Main Street. U. S. A.  
 Harry W. Fleck, No. 430 State Street.  
 Thomas L. Ellis, No. 332 West Avenue.  
 Charles R. Townsend, No. 346 State Street.  
 Herbert E. Smyth, No. 27 Courtland Street.  
 Harry R. Bennett, No. 947 State Street.  
 J. Murray Johnson, No. 169 State Street.  
 Elmer F. Blank, No. 489 East Main Street.  
 Charles S. Goodwin, No. 527 State Street.  
 George M. DeLisser, No. 508 Noble Avenue.  
 Irving L. Nettleton, No. 385 Noble Avenue.  
 Richard W. Ivers, No. 408 State Street.  
 Frederick S. Wakefield, No. 311 State Street.  
 Edwards M. Smith, 340 State Street.

## BETHEL :

A. E. Barber.  
George DeWitt Wight.

## BROOKFIELD :

Junius F. Smith.

## DANBURY :

F. P. Clark.  
 E. A. Stratton.  
 W. S. Watson.  
 D. Chester Brown.  
 H. F. Brownlee.  
 John H. Benedict.  
 Nathaniel Selleck.  
 George E. Lemmer.  
 \*Charles F. Craig, U. S. A.  
 John A. Wade.  
 William F. Gordon.  
 W. H. Klernan.

## DARIEN :

George H. Noxon.

## FAIRFIELD :

W. H. Donaldson.

## Greenfield Hill:

M. V. B. Dunham.

## Southport:

Robert E. Perdue.  
Joseph L. Hetzel.

## GREENWICH :

Frank Terry Brooks.

## Cos Cob:

Kirk W. Holmes.

## HUNTINGTON—Shelton :

Gould A. Shelton.  
 William S. Randall.  
 Francis J. Nettleton.

\*Exempted from taxation.

- MONROE—Stepney :  
SETH HILL.
- NEW CANAAN :  
Clarence H. Scoville.
- NEWTOWN—Sandy Hook :  
James W. Gordon.
- NORWALK :  
James G. Gregory.  
R. L. Higgins.  
S. H. Huntington.  
William J. Tracy.
- South Norwalk :  
A. N. Clark.  
C. G. Bohannan.  
Lauren M. Allen.  
Henry C. Sherer.  
John T. Kennedy.  
Jean Dumortier.  
Wright B. Bean.
- East Norwalk :  
Frederick B. Baker.
- REDDING :  
Ernest H. Smith.
- RIDGEFIELD :  
Russell W. Lowe.  
Howard P. Mansfield.
- STAMFORD :  
A. M. Hurlbut.  
Samuel Pierson.
- A. N. Phillips.  
\*C. R. Hexamer. U. S. A.  
P. P. Van Vleet.  
F. Schavoir.  
Wm. A. R. Treadway.  
F. J. Rogers.  
Rosavelle G. Philip.  
James A. Meek.  
George Sherrill.  
Watson E. Rice.  
Frank M. Tiffany.  
Daniel A. Hanrahan.  
Myre J. Brooks.  
Leonard W. Munson.
- STRATFORD :  
W. B. Cogswell.  
G. F. Lewis.
- WESTON—Lyon's Plains :  
F. Gorham.
- WESTPORT :  
George B. Bouton.  
F. Powers.  
Loren T. Day.  
F. D. Ruland.  
\*L. H. Wheeler. U. S. A.  
J. M. Nolan.
- WILTON :  
A. B. Gorham.
- South Wilton :  
Edward Everett Smith.

## WINDHAM COUNTY.

LAURA H. HILLS, M.D., Willimantie, President.

FRANK H. COOPS, M.D., Danielson, Vice President.

JAMES L. GARDNER, M.D., Central Village, Clerk.

*County Reporter*—W. H. JUDSON, M.D., Danielson.

*Censors*—LOWELL HOLBROOK, M.D., OMAR LARUE, M.D.,

F. E. GUILD, M.D.

BROOKLYN—Wauregan :  
A. H. Tanner.  
Frederick E. Rainville.

CHAPLIN :  
Charles M. Knight.

DANIELSON :  
RIENZI ROBINSON.  
W. H. Judson.  
C. J. Le Clair.  
Frank R. Coops.  
James R. Shannon.

HAMPTON :  
Amos Avery.

KILLINGLY :  
Ashael E. Darling.  
Henry L. Hammond.

East Killingly :  
Charles E. Hill.

MOOSUP :  
Charles N. Allen.  
W. W. Adams.  
Alphonse Fontaine.

\*Exempted from taxation.

Central Village.  
 \*James L. Gardner.

POMFRET :  
 S. B. Overlock.

PUTNAM :  
 John B. Kent.  
 F. A. Morrell.  
 Omar LaRue.  
 Lewis O. Morasse.  
 Warren W. Foster.

THOMPSON :  
 \*LOWELL HOLBROOK.

North Grosvenor Dale :  
 J. F. McIntosh.

WINDHAM :  
 F. E. Guild.

WILLIMANTIC :  
 Frederiek Rogers.  
 T. MORTON HILLS.  
 C. J. Fox.  
 T. R. Parker.  
 John Weldon.  
 R. C. White.  
 George W. May.  
 Laura H. Hills.  
 Joseph A. Girouard.

WOODSTOCK—East Woodstock :  
 Charles C. Gildersleeve.

Woodstock Valley :  
 Henry R. Lowe.

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## LITCHFIELD COUNTY.

JOHN C. KENDALL, M.D., Norfolk, President.  
 JEROME S. BISSELL, M.D., Torrington, Vice President.  
 ALBERT E. COBB, M.D., Falls Village, Clerk.  
*County Reporter*—ELIAS PRATT, M.D., Torrington.  
*Censors*—S. G. HOWD, M.D., J. H. NORTH, M.D.,  
 W. S. RICHARDS, M.D.

Annual Meeting, fourth Tuesday in April; semi-annual, second Tuesday in October.

BETHLEHEM :  
 Etta May Hadley-Judd.

CANAAN—Falls Village :  
 \*Albert E. Cobb.

CORNWALL—Cornwall Bridge :  
 W. M. S. Curtiss.

West Cornwall :  
 Arthur M. Pratt.

GOSHEN :  
 J. H. North.  
 Noah S. Wadhams.

KENT :  
 W. M. Barnum.

LITCHFIELD :  
 C. O. Belden.  
 J. T. Sedgwick.  
 John L. Buel.  
 W. S. MacLaren.  
 Charles I. Page.  
 Charles N. Warner.

Bantam :  
 Albert L. Schuyler.

NEW HARTFORD :  
 \*Jerry Burwell.  
 Josiah Swett.

NEW MILFORD :  
 G. E. Staub.

NORFOLK :  
 John C. Kendall.  
 I. L. Hamant.  
 Lucius D. Bulkley.  
 Frederiek S. Dennis.

NORTH CANAAN—Canaan  
 C. W. Camp.  
 F. H. Lee.

PLYMOUTH—Terryville :  
 W. P. Swett.  
 W. W. Wellington.  
 M. P. Robinson.

SALISBURY :  
 P. H. Sellew.

Lakeville :  
 W. Bissell.  
 G. H. Knight.  
 W. B. Bissell.

\*Exempted from taxation.



SHARON :	WASHINGTON :
C. W. Bassett.	ORLANDO BROWN.
	William J. Ford.
THOMASTON :	New Preston:
RALPH S. GOODWIN.	R. A. Marcy.
George D. Ferguson.	
T. G. O'Connell.	
TORRINGTON :	WATERTOWN :
William L. Platt.	Ernest K. Loveland.
Thatcher S. Hanchett.	
Elias Pratt.	WINCHESTER—Winsted :
J. W. Johnson.	E. L. Pratt.
Jerome S. Bissell.	W. S. Hulbert.
James D. Hayes.	Salmon J. Howd.
Albert L. House.	West Winsted:
Abram J. Baker.	E. H. Welch.
C. H. Carlin.	W. S. Richards.
*Sanford H. Wadhams.	WOODBURY :
H. D. Moore.	D. R. Rodger.
Michael R. Laden.	

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## MIDDLESEX COUNTY.

HENRY S. NOBLE, M.D., Middletown, President.

FRANK E. POTTER, M.D., Portland, Vice President.

FRANK K. HALLOCK, M.D., Cromwell, Clerk.

*County Reporter*—JOHN E. LOVELAND, M.D., Middletown.*Censors*—S. W. TURNER, M.D., GEORGE W. BURKE, M.D.,

M. C. HAZEN, M.D.

Annual Meeting, second Thursday in April; semi-annual, second Thursday in October.

CHATHAM—Middle Haddam :	HADDAM :
George N. Lawson.	Miner C. Hazen.
East Hampton:	KILLINGWORTH :
Albert Field.	Edward P. Nichols.
CHESTER :	MIDDLETOWN :
*Sylvester W. Turner.	*George W. Burke.
Fred. Sumner Smith.	FRANCIS D. EDGERTON.
CLINTON :	Wm. E. Fisher.
Herbert S. Reynolds.	Charles E. Stanley.
CROMWELL :	James M. Keniston.
*Frank K. Hallock.	Henry S. Noble.
Charles E. Bush.	Michael D. Murphy.
Clara M. DeHart.	John E. Bailey.
DURHAM :	Arthur J. Campbell.
Earl Mathewson.	Arthur B. Coleburn.
EAST HADDAM :	J. Francis Calef.
M. W. Plumstead.	John E. Loveland.
Emma J. Thompson.	Kate C. Mead.
ESSEX :	Lewis Maitland.
Charles H. Hubbard.	Daniel A. Nolan.
	Roger C. Downey.
	Charles W. Page.
	Allen Ross Defendorf.

\*Exempted from taxation.

John H. Mountain.  
 William Fitzgerald.  
 Charles B. Young.  
 Jessie W. Fisher.  
 OLD SAYBROOK :  
 JOHN H. GRANNIS.  
 William D. Spencer.  
 PORTLAND :  
 Cushman A. Sears.

Frank E. Potter.  
 James Murphy.  
 SAYBROOK—Deep River :  
 \*Edwin Bidwell.  
 H. T. French.  
 Westbrook:  
 Thomas B. Bloomfield.

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## TOLLAND COUNTY.

THOMAS F. O'LAUGHLIN, M.D., Rockville, President.  
 ELI P. FLINT, M.D., Rockville, Vice President.  
 EDWIN T. DAVIS, M.D., Ellington, Clerk.  
*County Reporter*—C. B. NEWTON, M.D., Stafford Springs.  
*Censors*—E. P. FLINT, M.D., T. F. O'LAUGHLIN, M.D.,  
 C. F. SUMMER, M.D.

Annual Meeting, third Tuesday in April; semi-annual, third Tuesday  
 in October.

BOLTON :  
 \*CHAS. F. SUMNER.  
 COVENTRY :  
 William C. Haven.  
 South Coventry:  
 W. L. Higgins.  
 Clarence E. Simonds.  
 ELLINGTON :  
 \*E. T. Davis.  
 MANSFIELD—Mansfield Depot :  
 F. E. Johnson.  
 ROCKVILLE :  
 Frederick Gilnack.

T. F. Rockwell.  
 E. P. Flint.  
 T. F. O'Laughlin.  
 SOMERS :  
 A. L. Hurd.  
 STAFFORD—Stafford Springs :  
 C. B. NEWTON.  
 F. L. Smith.  
 Daniel Sullivan.  
 Frank B. Newton.  
 VERNON :  
 \*A. R. GOODRICH.

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\*Exempted from taxation.

# ALPHABETICAL LIST

OF THE

## MEMBERS OF THE CONNECTICUT MEDICAL SOCIETY,

*With Date and Place of Graduation, and Post-Office Address.*

In preparing this list the Secretary has followed the list in the Proceedings of 1892, made with great care and labor by Dr. J. B. Lewis for the Centennial year. It may be relied upon as being correct.

Name.	Medical Graduation.	P. O. Address.
Abrams, Alva Elnathan,	Albany, '81,	Hartford.
Adams, Frederick Joseph,	Univ. N. Y., '95,	Bridgeport.
Adams, William Waldo,	Bellevue, '91,	Moosup.
Allen, Charles Noah,	Univ. Vt., '81,	Moosup.
Allen, Howard Oliver,	Univ. N. Y., '79,	Broad Brook.
Allen, Lauren Melville,	P. & S., N. Y., '80,	So. Norwalk.
Alling, Arthur Nathaniel, B.A.,	P. & S., N. Y., '91,	New Haven.
Almy, Leonard Ballou, B.A., '72,	Bellevue, '76,	Norwich.
Alton Charles De Lancey,	Bellevue, '75,	Hartford.
Anderson, Arvid,	Univ. Mich., '93,	New Britain.
Anderson, Henry Gray,	P. & S., N. Y., '89,	Waterbury.
Arnold, Ernest Hermann,	Yale, '94,	New Haven.
Atwater, Caleb Huntington,	P. & S., N. Y., '71,	Wallingford.
Avery, Amos,	L. I. Hosp. Coll., '99,	Hampton.
Axtelle, John Franklin,	L. I. Hosp. Coll., '71,	Hartford.
Axtelle, Thomas Lincoln,	Bellevue, '81,	Waterbury.
Bacon, Francis,	Yale, '53,	New Haven.
Bacon, Leonard Woolsey, Jr.,	Yale, '92,	New Haven.
Bacon, William Turner,		
B.A., Yale, '68, M.A., '71,	Univ. N. Y., '71,	Hartford.
Bailey, George Cornelius,	Univ. N. Y., '86,	Hartford.
Bailey, John Elmore,	P. & S., N. Y., '85,	Middletown.
Bailey, Michael Angelo,	P. & S., Balt., '93,	Hartford.
Baker, Frederick Birdseye,	Univ. Md., '88,	E. Norwalk.
Banks, Charles Lincoln,	P. & S., N. Y., '91,	Bridgeport.
Barber, Alvin Elizur,	Berkshire, '54,	Bethel.
Barber, Walter Lewis,	Bellevue, '73,	Waterbury.
Baribault, Arthur Octave,	Vict. Med. Col., '89,	New Haven.
Barnes, Lewis, B.A., M.A., '47,	Buffalo Univ., '50,	Oxford.
Barnes, William Samuel, Ph.B.,		
Yale, '95,	Yale, '97,	New Haven.
Barnett, John Frederick,	Yale, '69,	West Haven.
Barnum, Walter Milo,	P. & S., N. Y., '83,	Kent.
Barrows, Benj. Safford, Ph.B.,		
'83,	Univ. N. Y., '87,	Hartford.
Bartlett, Charles Joseph, B.A.,		
Yale, '92; M.A., Yale, '94,	Yale, '95,	New Haven.

Name.	Medical Graduation.	P. O. Address.
Bassett, Clarence Wheeler,	Univ. N. Y., '82,	Sharon.
Beach, Charles Coffing,	P. & S., N. Y., '82,	Hartford.
Beach, Edward Charles,	Yale, '88,	Milford.
Bean, Wright Butler,	P. & S., N. Y., '95,	South Norwalk.
Beard, Theodore Edward, Jr.,	Yale, '97,	New Haven.
Beckwith, Frank Edwin, M.A., '81,	P. & S., N. Y., '71,	New Haven.
Beebe, George Hoxie,	Univ. N. Y., '78,	Guilford.
Belden, Charles Ogilvie,	P. & S., N. Y., '82,	Litchfield.
Bell, George Newton,	Yale, '92,	Hartford.
Bell, Newton Stephen,	Univ. Vt., '64,	Windsor.
Bellosa, Frederick,	Yale, '72,	New Haven.
Benedict, Frank Allen,	P. & S., N. Y., '87,	Seymour.
Benedict, John Howe,	Conn. Med. Soc., '58,	Danbury.
Benedict, John Mitchell,	Univ. N. Y., '82,	Waterbury.
Bennett, Harry Raymond,	Univ. Vt., '96,	Bridgeport.
Bidwell, Edwin,	Yale, '47,	Deep River.
Bill, Curtis Harvey,	Univ. N. Y., '59,	Bridgeport.
Bishop, Frederick Courtney, B.A., Yale, '92,	Yale, '95,	New Haven.
Bishop, Louis Bennett, B.A., '86,	Yale, '88,	New Haven.
Bishop, Timothy Huggins,	Yale, '60,	New Haven.
Bissell, Evelyn Lyman,	Yale, '60,	New Haven.
Bissell, Jerome Samuel,	Yale, '94,	Torrington.
Bissell, William, B.A., Yale, '53,	Yale, '56,	Lakeville.
Bissell, William Bascom, A.B., Yale, '88,	P. & S., N. Y., '92,	Lakeville.
Blanchard, Irving DeLoss,	Yale, '97,	Hartford.
Blank, Elmer Francis,	Starling, '97,	Bridgeport.
Blodget, Henry, A.B., Yale, '75,	Bellevue, '81,	Bridgeport.
Bloomfield, Thomas Blanch,	P. & S., N. Y., '76,	Westbrook.
Bohannon, Charles Gordon,	Univ. N. Y., '78,	South Norwalk.
Botsford, Charles Porter,	Yale, '94,	Hartford.
Boucher, John Bernard,	P. & S., Balt., '91,	Hartford.
Bouton, George Beriah,	Y., '56; N. Y. M., '56,	Westport.
Brackett, Arthur Stone,	Jefferson, '95,	Bristol.
Bradley, William Lockwood, B.A., '60,	Yale, '64,	New Haven.
Bradstreet, Edward Thomas, B.A., '74,	P. & S., N. Y., '77,	Meriden.
Braman, Francis Nelson,	Bellevue, '66,	New London.
Brayton, Charles Erskine,	P. & S., N. Y., '73,	Stonington.
Bragaw, Griswold,	Bellevue, '97,	New London.
Brennan, Amhrose Kirk,	Yale, '93,	New Haven.
Brewer, Edward Pliny, Ph.D.,	Dartmouth, '79,	Norwich.
Bromley, Daniel Tyler,	Yale, '67,	Hartford.
Brooks, Frank Terry, B.A., Yale,	P. & S., '93,	Greenwich.
Brooks, Myre Joel,	Yale, '67,	Stamford.
Brown, Charles Henry,	Univ. N. Y., '93,	Waterbury.
Brown, David Chester,	Yale, '84,	Danbury.
Brown, Orlando,	Yale, '51,	Washington.
Browne, William Tyler, Ph.B., '78,	Harvard, '82,	Norwich.
Brownlee, Harris Fenton,	P. & S., N. Y., '88,	Danbury.
Bulkley, Lucius Duncan, M.A.,	P. & S., N. Y., '69,	Norfolk.
Buel, John Laidlaw,	P. & S., N. Y., '88,	Litchfield.
Bull, John Norris,	P. & S., N. Y., '78,	Plainville.
Bull, Thomas Marcus,	P. & S., N. Y., '87,	Naugatuck.
Bunce, Henry Clinton,	Yale, '50,	Glastonbury.

Name.	Medical Graduation.	P. O. Address.
Bunce, Philip Dibble, A.B., Yale, '88,	P. & S., N. Y., '91,	Hartford.
Bunnell, Wilbur Pitkin,	Univ. N. Y., '62,	New Britain.
Burke, George Whiting, B.A., '39, M.A., '42, Wesleyan,	Yale, '43,	Middletown.
Burnap, Sidney Rogers, A.B., Union, '58,	P. & S., N. Y., '62,	Windsor Locks.
Burwell, Jeremiah,	Berkshire, '39,	New Hartford.
Bush, Charles Ellsworth,	Yale, '94,	Cromwell.
Cahill, Joseph Henry,	Balt. Univ., '92,	Hartford.
Cahill, Thomas Matthew,	Yale, '88,	New Haven.
Caldwell, William Elry,	Balt. Med. Col., '95,	West Suffield.
Calef, Jeremiah Francis, B.A., '77,	Yale, '80,	Middletown.
Camp, Charles Welford,	Univ. N. Y., '74,	Canaan.
Campbell, Arthur Joseph,	P. & S., Balt., '85,	Middletown.
Carlin, Charles Henry,	Univ. Mich., '96,	Torrington.
Carlson, Philip Patrick,	Univ. N. Y., '90,	Hartford.
Carmalt, William Henry, M.A., '81,	P. & S., N. Y., '61,	New Haven.
Carrington, Charles,	P. & S., N. Y., '60,	Farmington.
Case, Ida R. Gridley, B.A., Wes. Univ., '86; M.A., Wes., '88,	P. & S., Boston, '89,	Collinsville.
Cassidy, Patrick,	Univ. Vt., '65,	Norwich.
Cassidy, Patrick John, B.A., Yale, '94,	Johns Hopkins, '98,	New London.
Castle, Frank Edwin,	Yale, '70,	Waterbury.
Chapman, Albert Taylor,	P. & S., N. Y., '64,	Old Mystic.
Chapman, Sherman Hartwell, B.A., '53, M.A., '66,	P. & S., N. Y., '69,	New Haven.
Chatfield, Rollin Blackman,	Yale, '93,	Granby.
Cheney, Benjamin Austin, B.A., '88,	Yale, 90,	New Haven.
Chester, Thomas Weston, B.A., Rutgers, '92, M.A., '95,	P. & S., N. Y., '95,	Hartford.
Chipman, Edward Clifford,	P. & S., N. Y., '91,	Niantic.
Chipman, Ernest Dwight,	Yale, '97,	Waterbury.
Churchill, Asa Hopkins,	Yale, '57,	Meriden.
Clark, Arthur Norman,	P. & S., N. Y., '83,	South Norwalk.
Clark, Franklin Pierce,	P. & S., N. Y., '76,	Danbury.
Clark, Robert Moses,	Univ. Pa., '91,	New Britain.
Clary, George, A.B., '52, Dart. mouth,	Yale, '57,	New Britain.
Coates, Franklin Avery, A.B., '72; A.M., '75,	P. & S., N. Y., '75,	Mystic.
Cobb, Alfred Edward,	Yale, '98,	Falls Village.
Cochran, Levl Bennett,	Univ. Pa., '93,	Hartford.
Cogswell, William Badger,	Bellevue, '81,	Stratford.
Coholan, Michael James,	Univ. N. Y., '65,	New Britain.
Colburn, Arthur Burr,	P. & S., N. Y., '90,	Middletown.
Conkey, Caroline Root,	W. Med., N. Y., '81,	Waterbury.
Converse, George Frederick,	Yale, '87,	New Haven.
Coogan, Joseph Albert,	Bellevue, '76,	Windsor Locks.
Cook, Ansel Granville,	P. & S., N. Y., '87,	Hartford.
Cooke, Joseph Anthony,	Yale, '97,	Meriden.
Cooley, Myron Lynus,	Buffalo, '86,	Waterbury.
Cooper, Louis Edward, Ph.B., '84,	Yale, '86,	Ansonia.
Coops, Frank Harvey,	P. & S., Balt., '96,	Danielson.
Cowell, George B.,	P. & S., N. Y., '88,	Bridgeport.
Coyle, William Joseph,	Buffalo Med. Col., '85,	Windsor Locks.

Craig, Charles Franklin,	Yale, '94,	Danbury.
Craig, William Gibson,	Jefferson, '92,	Hartford.
Crane, Augustin Averill, B.A., '85,	Yale, '87,	Waterbury.
Crary, David,	Yale, '63,	Hartford.
Crofton, Joseph Richard,	P. & S., N. Y., '89,	New London.
Crossfield, Frederick Solon,	Bellevue, '78,	Hartford.
Crothers, Thomas Davison,	Albany, '65,	Hartford.
Crowe, Willis Hanford,	P. & S., N. Y., '95,	New Haven.
Crowley, William Holmes,	Buffalo Med. Col., '90,	Collinsville.
Curtiss, William Martin Stan- ley,	Balt. Univ. S. M., '93,	Cornwall B.
Daggett, William Gibbons, E.A., '80,	Univ. P., '84,	New Haven.
Darling, Ashael Ebenezer,	Harvard, '72,	Killingly.
Dart, Frederick Howard,	P. & S., N. Y., '84,	Niantic.
Davis, Charles Henry Stanley,	Univ. N. Y., '66,	Meriden.
Davis, Edwin Taylor,	Univ. Vt., '88,	Ellington.
Davis, Elias Wyman, B.A., Yale, '80,	Yale, '92,	Seymour.
Davis, Gustav Pierpont, B.A., '66,	P. & S., N. Y., '69,	Hartford.
Davis, Warren Russell,	Univ. Vt., '82,	Voluntown.
Davison, Luther Augustus,	Univ. N. Y., '82,	Hartford.
Day, Fessenden Lorenzo, B.A.,	Bellevue, '93,	Bridgeport.
Day, Loren True,	Yale, '80,	Westport.
Deane, Henry Augustus,	Dartmouth, '68,	South Windsor.
Defendorf, Allen Ross, E.A., Yale, '94,	Yale, '96,	Middletown.
DeForest, Louis Shepard, B.A., '79; M.A., '91,	Univ. Jena., '85,	New Haven.
DeHart, Clara Madana,	Woman's Med. Coll., N. Y. Inf., '94,	Cromwell.
Delaney, William Joseph,	McGill Univ., '87,	Naugatuck.
Delesdernier, Horace William,	Univ. Vt., '85,	Meriden.
DeLisser, Glenwood Medcalf,	Wash. Univ., '97,	Bridgeport.
Dennis, Frederic Shepard, B.A., Yale, '72; M.R.C.S.,	Bellevue, '74,	Norfolk.
DeWolfe, Daniel Charles,	Univ. Vt., '86,	Bridgeport.
Dickerman, Wilton Elias, B.A., Amherst, '90,	Yale, 93,	Hartford.
Donahue, James Joseph,	P. & S., Balt., '96,	Norwich.
Donaldson, William Henry,	Univ. N. Y., '81,	Fairfield.
Dooley, John Thomas,	Univ. N. Y., '87,	Manchester.
Douglass, Edmund Peaslee,	Univ. N. Y., '89,	Groton.
Dowling, John Francis,	L. I. Hosp. Coll., '90,	Hartford.
Down, Edwin Augustus,	P. & S., N. Y., '87,	Hartford.
Downey, Roger Charles,	Univ. Vt., '92,	Middletown.
Downs, Frederick Bradley,	Univ. N. Y., '78,	Bridgeport.
Drake, Norman Lucie,	Univ. N. Y., '91,	Stonington.
Dumortier, Jean,	Univ. Ghent, Belg., '89,	South Norwalk.
Dunham, Martin Van Buren,	Harvard, '67,	Greenfield Hill.
Edgerton, Francis Daniels, A.M., '61,	{ Univ. Vt., '61, { P. & S., N. Y., '64,	Middletown.
Eggleston, Jeremiah Dewey,	P. & S., N. Y., '79,	Meriden.
Eliot, Gustavus, B.A., '77; A.M., '82,	P. & S., N. Y., '80,	New Haven.
Ellis, Thomas Long, B.A., Yale, '94,	Yale, '96,	Bridgeport.
Elmer, Oliver Edward,	P. & S., Balt., '94,	Hartford.
Ely, John Slade, Ph.B., Yale, '81, M.A., Columbia, '97,	P. & S., N. Y., '86,	New Haven.

Enders, Thomas Burnham,	P. & S., N. Y., '91,	Hartford.
Ensign, Robert Eleazer,	Albany, '57,	Berlin.
Evans, Alexander William, Ph.B., '90,	Yale, '92,	New Haven.
Felty, John Wellington, A.M., Emporia, '91,	Jefferson, '84,	Hartford.
Fenn, Ava Hamlin,	P. & S., Balt., '86,	Meriden.
Ferguson, George Dean,	Univ. N. Y., '79,	Thomaston.
Ferrin, Carnsie Franklin, B.A., Univ. Vt., '91,	P. & S., N. Y., '95,	New London.
Ferris, Harry Burr, B.A., '87,	Yale, '90,	New Haven.
Field, Albert,	L. I. Coll. Hosp., '67,	E. Hampton.
Finch, George Terwilliger, B.A., M.A., '78,	Hobart, '75,	
Fisher, Jessie Weston,	Bellevue, '77,	Thompsonville.
	Woman's Med. Col., of Penna., '93,	Middletown.
Fisher, William Edwin,	Univ. Pa., '76,	Middletown.
Fiske, Isaac Parsons,	Univ. N. Y., '75,	Waterbury.
Fitzgerald, Edward,	P. & S., Balt., '84,	Bridgeport.
Fitzgerald, William,	Univ. Vt., '95,	Middletown.
Fleck, Harry Willard,	Univ. Pa., '96,	Bridgeport.
Fleischner, Henry,	Yale, '78,	New Haven.
Flint, Eli Percival,	Yale, '79,	Rockville.
Flynn, James Henry Joseph,	Yale, '95,	New Haven.
Fontaine, Alphonse,	Victoria, Can., '89,	Moosup.
Foote, Charles Jenkins, B.A., '83,	Harvard, '87,	New Haven.
Foster, John Pierpont Codring- ton, B.A., '69,	Yale, '75,	New Haven.
Foster, Warren Woodend,	Harvard, '82,	Wash'ton, D. C.
Fox, Charles James,	Univ. N. Y., '76,	Willimantic.
Fox, Edward Gager,	Univ. N. Y., '83,	Wethersfield.
Fox, Morton Earl,	L. I. Hosp., Coll., '93,	Uncasville.
French, Howard Truman,	P. & S., N. Y., '91,	Deep River.
Frenay, John Daniel,	L. I. Coll. Hosp., '93,	Waterbury.
Froclich, Charles Edward, M.A., Copenhagen, '64,	Copenhagen, '70,	Hartford.
Frost, Charles Warren Selah,	P. & S., N. Y., '80,	Waterbury.
Fuller, Horace Smith, Amherst, B.A., '58; A.M., '61,	P. & S., N. Y., '65,	Hartford.
Galvin, William,	Univ. Vt., '92,	Meriden.
Gardner, Charles Herman,	Univ. N. Y., '85,	New Haven.
Gandy, Raymond Reeves,	Univ. Pa., '99,	Colchester.
Gardner, James Lester,	Univ. Vt., '81,	Central Village.
Garlick, Samuel Middleton, B.A., Dart., '74,	Harvard, '77,	Bridgeport.
Gaylord, Charles Woodward, B.A.,	Yale, '72,	Branford.
Gilbert, Samuel Dutton, B.A., '69,	Yale, '71,	New Haven.
Gildersleeve, Charles Childs,	Yale, '96,	E. Woodstock.
Gill, Michael Henry,	Yale, '96,	Hartford.
Gillin, Charles Adelbert,	Univ. N. Y., '83,	Berlin.
Gilnack, Frederick,	P. & S., N. Y., '67,	Rockville.
Girouard, Joseph Arthur,	Balt. Med. Coll., '99,	Willimantic.
Gladwin, Ellen Hammond,	W. Med., N. Y., '72,	Hartford.
Godfrey, Charles Cartlidge,	Dartmouth, '83,	Bridgeport.
Gold, James Douglass, Ph.B.,	P. & S., '91,	Bridgeport.
Gompertz, Louis Michael,	Yale, '96,	New Haven.
Goodenough, Edward Winches- ter, B.A., Yale, '87,	Yale, '93,	Waterbury.
Goodrich, Alfred Russell,	Berkshire, '46,	Vernon.

Name.	Medical Graduation.	P. O. Address.
Goodrich, Charles Augustus, E.S., Mass. Ag. Col., '93,	P. & S., N. Y., '96,	Hartford.
Goodwin, Charles Sumner,	Univ. N. Y., '96,	Bridgeport.
Goodwin, Ralph Schuyler,	P. & S., N. Y., '66,	Thomaston.
Goodwin, Ralph Schuyler, Jr., Ph.B., Yale, '90,	P. & S., N. Y., '93,	New Haven.
Goodyear, Robert Beardsley,	Yale, '68,	North Haven.
Gordon, James William,	Bellevue, '88,	Sandy Hook.
Gordon, William Francis,	L. I. Hosp. Coll., '96,	Danbury.
Gorham, Andrew Bennett,	Yale, '73,	Wilton.
Gorham, Frank,	Yale, '76,	Lyon's Plain.
Grannis, John Henry,	Yale, '68,	Old Saybrook.
Granniss, Irwin,	Yale, '96,	New Haven.
Graves, Charles Burr, B.A., '82,	Harvard, '86,	New London.
Graves, Frederick Chauncey,	Univ. N. Y., '88,	Bridgeport.
Graves, Frederick George,	Yale, '92,	Waterbury.
Gray, William Henry,	P. & S., N. Y., '89,	Old Mystic.
Gray, William Wetmore, B.S., Dickinson, '85,	Bellevue, '90,	Bridgeport.
Gregory, James Glynn, B.A., '65,	P. & S., N. Y., '68,	Norwalk.
Griggs, Edward Luther,	L. I. Hosp. Coll., '64,	Waterbury.
Griggs, John Bagg,	Yale, '97,	Farmington.
Griswold, Edward Hammond,	Univ. N. Y., '78,	E. Hartford.
Griswold, Frederick Pratt,	P. & S., N. Y., '76,	Meriden.
Griswold, Rufus White,	P. & S., N. Y., '54,	Rocky Hill.
Guild, Frank Eugene,	L. I. Hosp. Coll., '85,	Windham.
Hadley-Judd, Etta May,	Women's Med. Coll., Phila., '95,	Bethlehem.
Haire, Edward Aloysius,	Univ. Balt., '98,	Derby.
Hall, Edward Dormenio,	Harvard, '73,	Meriden.
Hall, Joseph Barnard,	Yale, '92,	Hartford.
Hallock, Frank Kirkwood, A.B., A.M., '82,	P. & S., N. Y., '85,	Cromwell.
Hamant, Irving Louls,	L. I. Hosp. Coll., '90,	Norfolk.
Hamilton, Charles Allen,	Univ. Vt., '86,	Waterbury.
Hammond, Henry Louis, Ph.B., '64,	Harvard, '66,	Killingly.
Hammond, Samuel Mowbray, Ph.B., Yale, '93,	Yale, '96,	New Haven.
Hanchett, Thatcher Swift,	Bellevue, '64,	Torrington.
Hanrahan, Daniel Aloysius,	Bellevue, '95,	Stamford.
Harriman, Patrick Henry,	Univ. N. Y., '84,	Norwich.
Harris, George Robert,	P. & S., N. Y., '85,	Norwich.
Hart, Charles Remington,	P. & S., N. Y., '59,	Bethel.
Haskell, Charles Nahum,	Univ. Vt., '90,	Bridgeport.
Haven, William Chadbourne,	Univ. N. Y., '77,	Coventry.
Hawkes, Wm. Whitney, B.A., '79,	Yale, '81,	New Haven.
Hayes, Arthur Douglass,	Dartmouth, '96,	Hartford.
Hayes, James Dermot, B.S., Man. Coll., N. Y.,	Univ. N. Y., '94,	Torrington.
Hayes, John Frances,	Univ. N. Y., '79,	Waterbury.
Hazen, Miner Comstock,	Univ. Mich., '55,	Haddam.
Heady, Elias Buel,	Yale, '72,	Milford.
Heft, G. Stanley,	Univ. Vt., '95,	Bridgeport.
Hemingway, George Isaac,	Univ. Vt., '97,	New Haven.
Henrahan, Bernard Eliot,	Jefferson, '97,	New Haven.
Hetzel, Joseph Linn,	Bellevue, '91,	Southport.
Hewes, Frank William,	Univ. Vt., '94,	Groton.
Heyer, Harold Hankinson,	Univ. N. Y., '87,	New London.
Hexamer, Carl Reisig, B.S., '83,	P. & S., N. Y., '86,	Stamford.



Name.	Medical Graduation.	P. O. Address.
Higgins, Harry Eugene,	Univ. N. Y., '96,	Norwich.
Higgins, Royal Lacey,	Bellevue, '67,	Norwalk.
Higgins, William Lincoln,	Univ. N. Y., '90,	So. Coventry.
Hill, Charles Edwin, B.A., '76,	Harvard, '79,	E. Killingly.
Hill, Seth,	Yale, '66,	Stepney.
Hills, Laura Heath,	W. Med. Coll., Pa.,	Willimantic.
Hills, Thomas Morton,	Yale, '63,	Willimantic.
Hinckley, Donald Rose, B.A., Yale, '92,	Harvard, '96,	New Haven.
Holbrook, Charles Werden, M.A., Amherst, '93,	Yale, '96,	East Haven.
Holbrook, Lowell,	Univ. N. Y., '49,	Thompson.
Holmes, Arthur Almond,	Harvard, '65,	Bridgeport.
Holmes, George James,	Albany, '82,	New Britain.
Holmes, Kirk Wilder,	L. I. Hosp. Coll., '95,	Cos Cob.
Holroyd, Joseph Scripture,	P. & S., N. Y., '95,	Waterville.
Horton, William Wickham,	Univ. N. Y., '79,	Bristol.
Hotchkiss, Norton Royce,	Univ. Md., '91,	New Haven.
Houghton, Simon Willard,	Bellevue, '79,	Hazardville.
House, Albert Louis,	Yale, '95,	Torrington.
Howard, Arthur Wayland,	Univ. N. Y., '90,	Wethersfield.
Howard, John,	Dartmouth, '81,	Hartford.
Howd, Salmon Jennings,	Jefferson, '83,	Winsted.
Howe, Harmon George,	(Univ. Vt., '73, (P. & S., N. Y., '75,	Hartford.
Howe, Herbert H.,	Univ. Vt., '80,	Yantic.
Hoyt, Curtis Clark,	P. & S., N. Y., '87,	Bridgeport.
Hubbard, Charles Henry,	Yale, '60,	Essex.
Hubbard, Stephen Grosvenor, M.A., '60,	Dartmouth, '43,	New Haven.
Hudson, William Miller, B.A., Yale, '53,	Jefferson, '55,	Hartford.
Hughes, Oliver John Davls, Ph.D., Univ. Heidelberg, '71, M.S., London,	L. I. Hosp. Coll., '75,	Meriden.
Hulbert, William Sharon,	Univ. N. Y., '80,	Winsted.
Hungerford, Henry Edward,	Yale, '98,	Waterbury.
Huntington, Samuel Henry,	Yale, '76,	Norwalk.
Hurd, Alonzo L., B.S., Me., '82,	Univ. Vt., '91,	Somers.
Hurlbut, Augustin Moen, B.A., '76,	P. & S., N. Y., '79,	Stamford.
Ingalls, Phineas Henry, A.B., '77; A.M., Bowdoin, '85,	P. & S., N. Y., '80,	Hartford.
Irving, Samuel Wellington,	Yale, '91,	New Britain.
Isham, Oliver Kingsley,	Univ. N. Y., '88,	Hartford.
Ivers, Richard William,	Balt. Med. Coll., '95,	Bridgeport.
Ives, Robert Shoemaker, B.A., '64, M.A.,	Yale, '66,	New Haven.
Jennings, George Herman,	L. I. Hosp. Coll., '75,	Jewett City.
Johnson, Edwin Hines,	Univ. Vt., '88,	Naugatuck.
Johnson, Frederick Eugene,	Univ. N. Y., '69,	Mansfield.
Johnson, John Murray,	L. I. Hosp. Coll., '95,	Bridgeport.
Johnson, John William,	P. & S., Balt., '93,	Torrington.
Johnson, Marcus Morton, Ph.B., Brown, '70,	Univ. N. Y., '77,	Hartford.
Jones, Daniel Albton, B.A., Yale, '84; D.M.D., Harvard, '89,	Yale, '92,	New Haven.
Judson, Walter, B.A., '64; M.A., '97,	P. & S., N. Y., '70,	New Haven.
Judson, Willam Henry,	Jefferson, '78,	Danielson.
Kane, Thomas Francis,	Bellevue, '87,	Hartford.

Name.	Medical Graduation.	P. O. Address.
Kellog, Clifford Walcott,	Yale, '96,	New Haven.
Kellogg, Evernghim Kenneth,	P. & S., N. Y., '98,	New Britain.
Kelly, Michael J.,	Balt. Med. Coll., '97,	Warehouse P'nt.
Kendall, John Calvin, B.A., '70,	P. & S., N. Y., '75,	Norfolk.
Keniston, James Mortimer,	Harvard, '71,	Middletown.
Kenna, William Matthew,		
Ph.B., Yale, '90,	Yale, '92,	New Haven.
Kennedy, John Timothy,	Univ. N. Y., '94,	South Norwalk.
Kent, John Bryden,	Harvard, '60,	Putnam.
Kiernan, Walter Henry,	Trinity, Toronto, '97,	Danbury.
Kilbourn, Clarence Leishman,	Yale, '97,	New Haven.
Kilbourn, Joseph Austin,	P. & S., Balt., '97,	Hartford.
Kimball, Rush Wilmot, A.B.,		
'87, Williams,	L. I. Hosp. Coll., '90,	Norwich.
Kingsbury, William Sanford,	Yale, '96,	Glastonbury.
Kirby, Frank Alonzo,	Columb. Univ.	
	Wash., D. C., '95,	New Haven.
Klenke, Henry Frederick,	Univ. N. Y., '92,	New Haven.
Knight, Charles Milo,	Louisville, '93,	Chaplin.
Knight, George Henry, A.M.,		
Yale, '98,	P. & S., N. Y., '86,	Lakeville.
Knight, William Ward,	Univ. N. Y., '76,	Hartford.
Laden, Michael Richard,	Univ. Balt., '98,	Torrington.
Lamb, Chauncey Stafford,	Buffalo, '93,	New Haven.
Lambert, Benjamin Lott,	Univ. N. Y., '83,	New Haven.
LaPierre, Julian,	Bellevue, '71,	Norwich.
LaPoint, John William Henry,	Lavalle Univ.,	
	Montreal, '92,	Meriden.
LaRue, Omer,	Viet., Montreal, '71,	Putnam.
Lauder, Robert, M.A.,	Yale, '71,	Bridgeport.
Law, Homer Lyeurgus,	Jefferson, '69,	Hartford.
Lawrence, George Washington,	Yale, '90,	East Berlin.
Lawson, George Newton, B.A.,		
'90,	Yale, '92,	M. Haddam.
Lawton, Franklin Lyman,		
Ph.B., Yale, '90,	Yale, '93,	Hartford.
LeClair, Charles Joseph,	Victoria, '87,	Danielson.
Lee, Frank Herbert,	Albany, '88,	Canaan.
Lee, Harry Moore,	Columbia, '98,	New London.
Lemmer, George Edward,	Bellevue, '85,	Danbury.
Leverty, Robert Gordon,	Univ. N. Y., '95,	Bridgeport.
Lewis, George Francis, B.A., '64,	Yale, '65,	Collinsville.
Lewis, George Frederick, B.A.,		
'77,	Yale, '84,	Stratford.
Lewis, John Benjamin,	Univ. N. Y., '53,	Hartford.
Lindsley, Charles Augustus,		
B.A., '49; M.A.,	Yale, '52,	New Haven.
Lindsley, Chas. Purdy, Ph.B.,		
'75,	Yale, '78,	New Haven.
Littlejohn, Perey Dunean,	Yale, '97,	New Haven.
Lockhart, Reuben Arthur,	Yale, '91,	Bridgeport.
Loeb, Maximilian Lawrence,	Yale, '97,	New Haven.
Look, Frank Byron,	Bowdoin, '84,	Hartford.
Loomis, Francis Newton,		
B.A., '81,	Yale, '83,	Derby.
Loveland, Ernest Kilburn,	Yale, '97,	Watertown.
Loveland, John Elijah, A.B., '89,	Harvard, '92,	Middletown.
Lowe, Henry Russell,	Dartmouth, '82,	Woodst'k Vall'y.
Lowe, Russell Walter,	Univ. N. Y., '89,	Ridgefield.
Luhy, John Francis, Ph.B., '76,	P. & S., N. Y., '78,	New Haven.
Lynch, John Charles,	Univ. N. Y., '86,	Bridgeport.
Lyon, Edwin Bradbury,	Berkshire, '62,	New Britain.
Lyons, Andrew Wolff,	Columbus, '76,	Bridgeport.

Name.	Medical Graduation.	P. O. Address.
MacLaren, William Stevenson,	P. & S., N. Y., '89,	Litchfield.
Maher, James Stephen, Ph.B., Yale, '92,	Yale, '96,	New Haven.
Maher, Stephen John,	Yale, '87,	New Haven.
Mailhouse, Max, Ph.B., '76,	Yale, '78,	New Haven.
Maitland, Lewis,	Univ. Pa., '95,	Middletown.
Maloney, Daniel Joseph,	Univ. N. Y., '96,	Waterbury.
Mansfield, Howard Parker,	L. I. Hosp. Coll., '93,	Ridgefield.
Marcy, Robert Adrian,	Univ. N. Y., '82,	New Preston.
Mariani, Nicola,	Univ. Naples, '93,	New Haven.
Marsh, Arthur Washburn,	Univ. Vt., '82,	New Haven.
Martin, Thomas Francis,	Univ. N. Y., '82,	Bridgeport.
Mason, Jarvis King, Yale, B.A., '55; M.A., '59,	Harvard, '61,	Suffield.
Mathewson, Earl,	P. & S., N. Y., '79,	Durham.
May, George William,	Milwaukee, '95,	Willimantic.
Mayberry, Franklin Hayden,	Univ. Vt., '85,	Burnside.
Mayer, Nathan,	Cincinnati, '57,	Hartford.
McCabe, Edward Michael, B.A., '84,	Yale, '87,	New Haven.
McCook, John Butler,	P. & S., N. Y., '94,	Hartford.
McDonald, Edward Walsh,	Univ. N. Y., '71,	Waterbury.
McDonnell, Ralph Augustine, B.A., '90,	Yale, '92,	New Haven.
McGaughy, James David,	Jefferson, '70,	Wallingford.
McIntosh, Edward Francis,	Yale, '97,	New Haven.
McIntosh, James Fabien,	Victoria, '87,	N. G'svern'dale.
McKee, Frederick Lyman,	P. & S., N. Y., '99,	Hartford.
McKnight, Everett James, B.A., Yale, '76,	P. & S., N. Y., '79,	Hartford.
McMaster, Gilbert Totten,	Jefferson, '98,	New Haven.
McNeil, Archibald,	Dartmouth, '96,	New Haven.
McNeil, Rollin,	Yale, '62,	New Haven.
Mead, Kate Campbell,	Wom. Med. Coll., (Phil., '88,	Middletown.
Meek, James Albert,	McGill Univ., '75,	Stamford.
Meeks, Harold Albert,	Bellevue, '90,	Meriden.
Metz, Peter Frederick,	Univ. N. Y., '93,	New Haven.
Miles, Harry Shillingford, Ph.G., N. Y., '88,	P. & S., N. Y., '91,	Bridgeport.
Miller, George Root,	P. & S., N. Y., '88,	Hartford.
Minor, George Maynard,	L. I. Hosp. Coll., '85,	Waterford.
Mitchell, James Thomas,	Univ. N. Y., '91,	Colchester.
Monegan, Charles Andrew, B.S., Trinity, '33,	Univ. Pa., '98,	Waterbury.
Monahan, Joseph Bernard,	Dartmouth, '94,	New Haven.
Moody, Mary Blair,	Buffalo, '76,	New Haven.
Moore, James Albert, B.A., Yale, '92,	Yale, '94,	New Haven.
Morassee, Lewis Ovid,	Univ. Vict., '84,	Putnam.
Morgan, William Dennison, A.B., Trinity, '72,	P. & S., N. Y., '76,	Hartford.
Moriarty, James L'gouri,	Harvard, '96,	Waterbury.
Morrell, Frederick Augustus, B.A., Oberlin, '91; M.A.,	L. I. Hosp. Coll., '85,	Putnam.
Moulton, Edward Seymour, B.A., Oberlin, '91; M.A.,	Yale, '94,	New Haven.
Mountain, John Henry,	Jefferson, '96,	Middletown.
Munger, Carl Eugene, Ph.B., '80,	P. & S., N. Y., '83,	Waterbury.
Munson, Leonard Walter,	Georgetown Univ., '96,	Stamford.
Murphy, James,	Univ. Pa., '95,	Portland.
Murphy, Michael Daniel,	Bellevue, '84,	Middletown.
Murphy, Walter Graham,	Albany Med. Coll., '90,	E. Hartford.

Name.	Medical Graduation.	P. O. Address.
Nadler, Alfred Goldstein, B.A., Yale, '93,	Yale, '96,	New Haven.
Naylor, James Henry,	Univ. Vt., '95,	Hartford.
Nelson, Abiel Ward,	Harvard, '61,	New London.
Nettleton, Irving LaField,	L. I. Coll. Hosp., '98,	Bridgeport.
Newton, Cyrus Brownlie,	Yale, '56,	Stafford Springs.
Newton, Frank Brownlie,	Univ. Vt., '99,	Stafford Springs.
Newton, Matthew Turner,	Yale, '51,	Suffield.
Nichols, Edward Payson, A.B., '48; A.M., '51,	P. & S., N. Y., '52,	Killingworth.
Nickerson, Nehemiah,	N. Y. Med. Coll., '57,	Meriden.
Nicoll, John,	Yale, '54,	New Haven.
Noble, Henry Smith, A.B., '59,	P. & S., N. Y., '71	Middletown.
Nolan, Daniel Andrew, Ph.G., '94,	Med. Chir. Col., Pa., P. & S., Balt., '91,	Middletown. Westport.
Nolan, Jacob Matthew,	Tufts', '98,	Wallingford.
North, Caroline,	L. I. Hosp. Coll., '73,	Goshen.
North, James Howard,	Louisville, '94,	Avon.
North, John Leopold,	Balt. Med. Coll., '93,	Darien.
Noxon, George Henry,		
Ober, George Eugene,	Univ. Vt., '90,	Bridgeport.
O'Connell, Thomas Smith,	P. & S., Balt., '92,	E. Hartford.
O'Connell, Timothy Grattan,	Yale, '99,	Thomaston.
O'Conner, Matthew Charles, A.B., '69,	P. & S., N. Y., '73,	New Haven.
O'Connor, Patrick Thomas,	Bellevue, '92,	Waterbury.
O'Flaherty, John,	Albany, '64,	Hartford.
O'Hara, Bernard Augustine,	Bellevue, '82,	Waterbury.
O'Hara, William James Aloy- sius,	P. & S., Balt., '93,	Bridgeport.
O'Laughlin, Thomas Francis,	Univ. N. Y., '96,	Rockville.
Osborn, George Wakeman, B.A., '84,	P. & S., N. Y., '87,	Bridgeport.
Osborne, Oliver Thomas,	Yale, '84,	New Haven.
Otis, Samuel Dickinson,	Univ. N. Y., '77,	Meriden.
Overlock, Selden Barden,	Bellevue, '89,	Pomfret.
Paddock, Lewis Sloat, M.A.,	N. Y. Med. Coll., '54,	Norwich.
Page, Charles Ithamar,	P. & S., N. Y., '90,	Litchfield.
Page, Charles Whitney,	Harvard, '70,	Middletown.
Paige, Harris Lee,	Jefferson, '96,	New Britain.
Pallman, Theodore Dominic,	Yale, '97,	New Haven.
Park, Charles Edwin,	Yale, '81,	New Haven.
Parker, Theodore Raymond,	Univ. N. Y., '80,	Willimantic.
Parmele, George Luther, D.M.D.,	L. I. Hosp. Coll., '69,	Hartford.
Parsons, Edward Field, A.B., Williams, '48,	P. & S., N. Y., '58,	Thompsonville.
Peck, Anthony, B.A., '72,	Univ. N. Y., '75,	Norwich.
Peck, Robert Ellsworth, Ph.B., Yale, '90,	Yale, '93,	New Haven.
Peckham, Lucy Creemer,	Wom. Med., Pa., '85,	New Haven.
Perdue, Robert Ernest,	Starling, '92,	Southport.
Perkins, Charles Harris,	P. & S., N. Y., '91,	Norwich.
Perkins, William Sheldon Clark,	P. & S., N. Y., '60,	Norwich.
Phelps, Charles Dickinson, B.A., Amherst, '89; M.A., Amherst, '97,	P. & S., N. Y., '95,	New Haven.
Phillip, Rosavelle Gardner,	Wom. Med. Coll., (N. Y. Inf., '75,	Stamford.
Phillips, Alfred Noroton,	P. & S., N. Y., '83,	Stamford.

Name.	Medical Graduation.	P. O. Address.
Pierce, Elbridge Worthington,	Univ. N. Y., '85,	Meriden.
Pierson, Samuel,	P. & S., N. Y., '81,	Stamford.
Pinney, Royal Watson,	P. & S., N. Y., '88,	Derby.
Putman, Edwin Parker, B.A., '86,	Dartmouth, '91,	New Haven.
Platt, William Logan,	P. & S., N. Y., '81,	Torrington.
Plummer, Paul,	Univ. Vt., '94,	Collinsville.
Plumstead, Matthew Wood- bury,	Jefferson, '87,	E. Haddam.
Poore, John Robinson,	Harvard, '94,	Waterbury.
Porter, George Elmer, B.S., Dartmouth, '88,	Dartmouth, '91,	Warehouse P't.
Porter, George Loring, B.A., '59,	Jefferson, '62,	Bridgeport.
Porter, Isaac Napoleon, B.A., Lincoln Univ., '90,	Yale, '93,	New Haven.
Porter, William, Jr.,	Chic. Med. Coll., '81,	Hartford.
Potter, Frank Edward,	P. & S., N. Y., '89,	Portland.
Powers, Frederick,	P. & S., N. Y., '70,	Westport.
Pratt, Arthur Wilson,	Bellevue, '92,	W. Cornwall.
Pratt, Edward Loomis,	Univ. N. Y., '84,	Winsted.
Pratt, Elias,	P. & S., N. Y., '87,	Torrington.
Purdy, Alexander Marshall,	Univ. Vt., '84,	Mystic.
Rainville, Frederick E.,	Univ. Vt., '91,	Wauregan.
Randall, William Sherman, Ph.B.,	Yale, '83,	Shelton.
Rankin, Charles Goodrich, A.M., '87, Williams, A.B., '84,	Chic. Med. Coll., '86,	Glastonbury.
Rearson, Thomas Francis,	Univ. Vt., '94,	Thompsonville.
Reilly, James Michael,	Yale, '78,	New Haven.
Reinert, Emil Gustav,	Balt. Med. Coll., '95,	Hartford.
Reoch, William Stewart, Ph.B., Brown, '93,	P. & S., N. Y., '96,	Hartford.
Reynolds, Herbert Sumner,	Univ. N. Y., '81,	Clinton.
Rice, Watson Emmons,	Univ. Mich., '72,	Stamford.
Richards, William Spencer,	Univ. N. Y., '83,	W. Winsted.
Ring, Henry Wilson, A.B., '79, M.A.,	Me. Med. Coll., '81,	New Haven.
Rising, Harry Breed,	Yale, '95,	So. Glastonbury.
Rising, Henry Martin,	Yale, '68,	So. Glastonbury.
Robbins, Charles Henry,	Med. Coll., Balt., '95,	New Haven.
Robbins, George Orrin,	Yale, '79,	Waterbury.
Robbins, James Watson,	Bellevue, '80,	Naugatuck.
Roberts, Edward Kilbourne, Ph.B., '78,	Yale, '80,	New Haven.
Robinson, Myron Potter,	Yale, '95,	Terryville.
Robinson, Myron Winslow,	Berkshire, '60,	Noroton.
Robinson, Paul Skiff, Ph.B., Yale, '89,	Yale, '91,	New Haven.
Robinson, Rienzi,	L. I. Hosp. Coll., '63,	Danielson.
Rockwell, Thomas Francis,	Univ. N. Y., '81,	Rockville.
Rodger, David Robert, A.B., Hamilton, '82,	P. & S., N. Y., '88,	Woodbury.
Rodman, Charles Shepard,	P. & S., N. Y., '68,	Waterbury.
Rogers, Francis Joseph,	Univ. Pa., '73,	Stamford.
Rogers, Frederick,	Univ. N. Y., '63,	Willimantic.
Rogers, Thomas Weaver,	P. & S., N. Y., '90,	New London.
Root, Edward King,	Univ. N. Y., '79,	Hartford.
Root, Joseph Edward, B.S., '76, S.B., Boston Univ.,	P. & S., N. Y., '83,	Hartford.
Rose, John Henry,	Univ. N. Y., '92,	Hartford.
Rowe, Michael Matthew,	P. & S., Balt., '96,	Bridgeport.
Rowley, Alfred Merriman,	Univ. Vt., '97,	Hartford.

Name.	Medical Graduation.	P. O. Address.
Ruckoldt, Arthur,	Univ. Vt., '97,	New Haven.
Ruland, Fred Davis,	P. & S., N. Y., '89,	Westport.
Russell, Gurdon Wadsworth, Trinity, B.A., '34; M.A., '37,	Yale, '37,	Hartford.
Russell, Thomas Hubbard, Ph.B., Yale, '72,	Yale, '75,	New Haven.
Russell, William Spencer,	Yale, '80,	Wallingford.
Ryder, Charles Ambler,	Yale, '98,	Waterbury.
Sanford, Leonard Luther, B.A., Yale, '90,	Yale, '93,	New Haven.
Sanford, Ward Harding,	Balt. Med. Coll., '95,	New Haven.
Schavoit, Frederic,	P. & S., Balt., '87,	Stamford.
Schuyler, Albert Lewis,	Balt. Med. Coll., '95,	Bantam.
Scoville, Clarence Henry,	Balt. Med. Coll., '92,	New Canaan.
Sears, Cushman Allen,	Univ. N. Y., '62,	Portland.
Seaver, Jay Webber, B.A., '80,	Yale, '85,	New Haven.
Sedgwick, James Theodore,	Univ. N. Y., '85,	Litchfield.
Segur, Gideon Cross,	P. & S., N. Y., '82,	Hartford.
Selleck, Nathaniel,	Univ. N. Y., '89,	Danbury.
Sellew, Phillip Hamilton,	Jefferson, '90,	Salisbury.
Shannon, James Bernard,	Victoria, '89,	Danielson.
Sharpe, Elmer Thomas,	Univ. N. Y., '95,	Derby.
Sheedy, Bryan DeForest,	Univ. N. Y., '84,	Bridgeport.
Sheehan, William Joseph, B.S., Manhattan Col., '92,	Yale, '95,	New Haven.
Shelton, Gould Abijah, M.A., '91,	Yale, '69,	Shelton.
Shepard, Durell,	Yale, '64,	West Haven.
Shepherd, George Rubens,	Yale, '66,	Hartford.
Sherer, Henry Clifford,	Univ. N. Y., '92,	South Norwalk.
Sherrill, George,	P. & S., '91,	Stamford.
Simpson, Frederick Thomas, B.A., Yale, '79,	Me. Med. Coll., '84,	Hartford.
Skinner, Clarence Edward,	Yale, '91,	New Haven.
Slattery, Morris Dove,	Yale, '93,	New Haven.
Sleeper, George Everest,	Dartmouth, '95,	Hartford.
Smith, Andrew Jackson,	P. & S., N. Y., '63,	Bridgeport.
Smith, Edward Everett,	L. I. Hosp. Coll., '71,	South Wilton.
Smith, Edwards Montrose,	P. & S., N. Y., '82,	Bridgeport.
Smith, Edward Wier, A.B., Yale, '78,	McGill, Mont., '82,	Meriden.
Smith, Ernest Herman, A.B., Amherst, '85,	P. & S., N. Y., '89,	Redding.
Smith, Frank Lewis,	Univ. N. Y., '75,	Stafford Sp'gs.
Smith, Frederick Sumner, B.A., Yale, '79,	Yale, '82,	Chester.
Smith, Herbert Eugene, Ph.B., Yale, '79,	Univ. Pa., '82,	New Haven.
Smith, Henry Hubert,	Jefferson, '77,	Whitneyville.
Smith, Howard Franklin, B.A., Yale, '94,	Yale, '96,	Hartford.
Smith, Junius Foster,	L. I. Hosp. Coll., '90,	Brookfield.
Smith, Marvin,	Univ. N. Y., '83,	New Haven.
Smith, Newton Phineas,	P. & S., N. Y., '82,	Norwich.
Smith, Oliver Cotton,	L. I. Hosp. Coll., '83,	Hartford.
Smyth, Herbert Edmund,	McGill Univ., '84,	Bridgeport.
Snow, Frank Simeon,	Albany, '89,	Hartford.
Spencer, William David,	P. & S., N. Y., '76,	Saybrook.
Sperry, Frederick Noyes,	Yale, '94,	New Haven.
Sprenger, William,	Univ. Vt., '91,	New Haven.
Spring, Frederick,	Univ. N. Y., '85,	Naugatuck.
Standish, James Herbert,	Univ. N. Y., '95,	Hartford.

Name.	Medical Graduation.	P. O. Address.
Stanley, Charles Everett,	Univ. Pa., '76,	Middletown.
Stanton, George Dallas,	Bellevue, '65,	Stonington.
Stanton, John Gilman, B.A., Amherst, '70,	Wurtzburg, '73,	New London.
Staub, George Edwards,	L. I. Hosp. Coll., '93,	New Milford.
Steadman, Willard George,	Bellevue, '74,	Southington.
Stearns, Henry Putnam, B.A., Yale, '53; M.A., '56,	Yale, '55,	Hartford.
Stern, Charles Seymour,	Bellevue, '91,	Hartford.
Stetson, James Ebenezer,	Yale, '81,	New Haven.
St. John, Samuel Benedict, B.A., Yale, '66,	P. & S., N. Y., '75,	Hartford.
Stone, Jay Stephen,	P. & S., N. Y., '65,	New Britain.
Stratton, Edward Augustus,	Univ. N. Y., '83,	Danbury.
Street, Philo William,	Univ. Vt., '92,	Suffield.
Strickland, Rial,	Albany, '39,	Enfield.
Strosser, Hermann,	Univ. Berlin, '84,	New Britain.
Sullivan, Daniel,	Univ. N. Y., '97,	Stafford Sp'gs
Sullivan, Daniel Francis, A.B., Niagara Univ., '89,	Niagara Univ., '91,	Hartford.
Sullivan, John Francis, B.A., Yale, '90,	P. & S., N. Y., '94,	New Haven.
Sumner, Charles Fletcher,	Univ. W. N. Y., '40,	Bolton.
Swain, Henry Lawrence,	Yale, '84,	New Haven.
Swasey, Erastus Perry,	P. & S., N. Y., '69,	New Britain.
Swett, Josiah,	Univ. Vt., '78,	N. Hartford.
Swett, William Plummer,	Univ. Vt., '76,	Terryville.
Taft, Charles Ezra,	Harvard, '86,	Hartford.
Tanner, Alfred Herbert,	Bellevue, '74,	Brooklyn.
Taylor, John Clifton,	Mich. Univ., '91,	New London.
Tenney, Arthur John, Ph.B., Yale, '77,	Yale, '83,	Branford.
Thompson, George,	Me. Med. Coll., '89,	Taftville.
Thompson, Emma Jane,	Women's Med. Coll., N. Y. Inf., '96,	E. Haddam.
Thompson, Harriet Adaline,	Women's Med. Coll., Penn., '93,	Bridgeport.
Thomson, Edward Sanford,	P. & S., N. Y., '92,	New Haven.
Thomson, Hiram Benson,	Trin. Un., Tor., '88,	New London.
Tiffany, Frank Monroe, A.B., Amherst, '91,	Univ. Pa., '96,	Stamford.
Tingley, Witter Kinney,	Bellevue, '86,	Norwich.
Tinker, William Richard,	Univ. N. Y., '80,	S. Manchester.
Topping, Jacob Reed,	Univ. N. Y., '82,	Bridgeport.
Townsend, Charles Rodman,	Albany, '95,	Bridgeport.
Townsend, George Hodgson,	Bellevue, '93,	Branford.
Townsend, Jos. Hendley, B.A., Yale, '85,	Yale, '87,	New Haven.
Traeey, William Joseph,	Univ. N. Y., '89,	Norwalk.
Tracy, Andrew William,	McGill, Mont., '73,	Meriden.
Treadway, William A. Buck- ingham,	Univ. Mich., '83,	Stamford.
Trecartin, David Munson,	Dartmouth, '94,	Bridgeport.
Tudor, Mary Starr,	Women's Med. Coll., Phila., '93,	South Windsor.
Tukey, Frank Martin, B.A., Bowdoin, '91,	Harvard, '94,	Bridgeport.
Turner, Sylvester Wooster, B.A., Yale, '42,	Yale, '46,	Chester.
Tuttle, Albert Lake,	Albany, '88,	Milford.
Tuttle, Charles Alling, Ph.B., Yale, '88,	Yale, '91,	New Haven.

Name.	Medical Graduation.	P. O. Address.
Tuttle, Frank Benjamin,	Yale, '63,	Naugatuck.
Tuttle, Frank James,	Univ. Vt., '98,	Naugatuck.
Tyler, Jr., Heman Augustin,	Yale, '98,	Hartford.
Van Vleet, Peter P.,	Bellevue, '69,	Stamford.
Varno, Henry George,	P. & S., Balt., '82,	Thompsonville.
Verdi, William Francis,	Yale, '94,	New Haven.
Wade, John Alexander,	Bellevue, '93,	Danbury.
Wadhams, Sanford Hosea,	Yale, '96,	Torrington.
Wadhams, Noah Samuel, Ph.B.,	Yale, '90,	Goshen.
Yale, '97,	Bellevue, '88,	Hartford.
Waite, Frank Louis,	P. & S., N. Y., '99,	Bridgeport.
Wakefield, Frederick Symonds,	Jefferson, '96,	Litchfield.
Warner, Charles Norton,	Univ. Vt., '90,	Hartford.
Waters, John Bradford,	L. J. Hosp. Coll., '87,	Danbury.
Watson, Wilbur Seymour,	Yale, '16,	Madison.
Webb, Daniel Meigs, B.A.,	Queen's Un., Kingston,	Hartford.
Yale, '16,	Ont., '91,	W. Winsted.
Weir, Janet Marshall,	Yale, '76,	Hartford.
Welch, Edward Hubbard,	P. & S., N. Y., '78,	New Haven.
Welch, George Kellogg,	Yale, '77,	Willimantic.
Welch, William Collins,	Univ. N. Y., '83,	S. Manchester.
Weldon, John,	Univ. N. Y., '83,	Terryville.
Weldon, Thomas Henry,	Univ. Vt., '89,	
Wellington, William Winthrop,	P. & S., N. Y., '52,	Farmington.
Wheeler, Franklin, B.A.,	Yale, '80,	New Haven.
Yale, '47; M.A., Yale, '67,	Yale, '82,	Westport.
Wheeler, Frank Henry, B.A.,	Yale, '97,	Bridgeport.
Yale, '80,	L. I. Hosp. Coll., '86,	Willimantic.
Wheeler, Lewis Hawley,	Univ. Vt., '89,	Manchester.
White, Benjamin Franklin,	Dartmouth, '72,	New Haven.
White, Robert Creighton,	Bellevue, '74,	Bethel.
Whitton, Francis Henry,	Bellevue, '87,	Ansonia.
Whittemore, Frank Hamilton,	Univ. N. Y., '91,	
Wight, George DeWitt,	Harvard, '75,	Bridgeport.
Wilnot, Louis Howard,	P. & S., Balt., '86,	Bristol.
Wilson, Frederick Morse, A.B.,	Yale, '52,	Windsor.
Colby, '71,	P. & S., Balt., '90,	Wallingford.
Wilson, John Joseph,	Yale, '67,	West Haven.
Wilson, Samuel Allen,	P. & S., N. Y., '65,	New Haven.
Wilson, William Patrick,	Univ. N. Y., '97,	New Haven.
Wilson, William Virgil,	Yale, '65,	Norwich.
Winchell, Alvered Ezra, A.B.,	{ Tex. Med. Coll., '76,	
Wesleyan, '57,	{ Bellevue, '83,	Hartford.
Winne, William Nelson,	Univ. N. Y., '79,	Tariffville.
Witter, William,	Jefferson, '73,	Bridgeport.
Wolff, Arthur Jacob,	Univ. N. Y., '80,	Bridgeport.
Wooster, Charles Morris,	Univ. N. Y., '65,	Plainville.
Wordin, Nathaniel Eugene,	Yale, '93,	New Haven.
B.A., Yale, '79; Yale M.A., '72,		
Wright, John Winthrop, A.B.,		
Amherst, '77,		
Wright, Theodore Goodelle,		
Wurtenberg, William Charles,		
Ph.B., Yale, '89,		
Young, Charles Bellamy,		
	P. & S. N. Y., '94,	Middletown

Members noticing any errors or omissions in any part of this record will please inform the Secretary for correction in future lists.



