PROCEEDINGS

OF THE

CONNECTICUT MEDICAL SOCIETY:

EIGHTY-FIFTH ANNUAL CONVENTION,

1876.

PUBLISHED BY THE SOCIETY:
C. W. CHAMBERLAIN, M. D., Secretary.
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1876-77

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

CONTENTS.

CONTENTS.

OBITUARIES.

LIST OF MEMBERS.

APPENDIX.

The President's Address and the Dissertation were not put into the hands of the Committee of Publication.

ERRATA.

Page 41, line 7, for episeleral read episcleral.
Page 55, for Edipis read Œdipus.
Page 144, for Dr. Buek read Dr. Breck.

The next Annual Convention will be held in Hartford the 4th Wednesday in May, 1877.

PROCEEDINGS

CONNECTICUT MEDICAL SOCIETY—EIGHTY-FIFTH ANNUAL MEETING.

The President and Fellows of the Connecticut Medical Society met in the Common Council Chamber, City Hall, New Haven, on the 24th day of May, 1876, at 3 o'clock, P. M.

The President, Dr. Pliny A. Jewett of New Haven, called the meeting to order, and in accordance with a by-law of the society, which renders it the duty of the president to make such suggestions as he may think proper, called the attention of the Fellows to certain matters of unfinished business relating to the election of honorary members, to the appointment of censors, and their duties in reference to the preliminary education to be required of those commencing the study of medicine, to the reformatory institution for inebriates, and to the renewed attempts to rob Dr. Horace Wells of the honor of having discovered the use of anæsthetics.

Drs. M. C. White and W. L. Bradley, were appointed a committee on credentials, and having examined the returns from the Clerks of County Associations, they reported the following list of Fellows, which was accepted, and read by the Secretary, viz:

LIST OF FELLOWS, EX OFFICIO.

President.

Pliny A. Jewett, M. D.

Vice-Presidents.

A. W. Barrows, M. D.

Charles Carrington, M. D.	*L. Holbrook, M. D.
G. L. Platt, M. D.	*B. B. North, M. D.
*Isaac G. Porter, M. D.	*A. W. Hough, M. D.
*W. G. Bronson, M. D.	*A. R. Goodrich, M. D.

J. C. Jackson, M. D., *Treasurer.*

M. C. White, M. D., *Secretary.*

* Absent.

Committee on matters of professional interest in the State.

C. A. Lindsley, M. D. *W. A. M. Wainwright, M. D.
*H. W. Buel, M. D.

FELLOWS ELECTED IN 1876.

Hartford County.

E. K. Hunt, M. D. C. W. Chamberlain, M. D.
J. O'Flaherty, M. D. S. R. Burnap, M. D.
G. R. Shepard, M. D.

New Haven County.

S. C. Bartlett, M. D. L. J. Sanford, M. D.
W. L. Bradley, M. D. B. H. Catlin, M. D.
J. F. Barnett, M. D.

New London County.

Ashbel Woodward, M. D. G. W Harris, M. D.
*L. S. Paddock, M. D. *A. T. Nelson, M. D.
*W. S. C. Perkins, M. D.

Fairfield County.

*N. E. Worden, M. D. G. M. Teeple, M. D.
*C. W. Sheffrey, M. D. *Elijah Gregory, M. D.
*Samuel Lynes, M. D.

Windham County.

J. B. Whitcomb, M. D. Samuel Hutchins, M. D.
*John Witter, M. D. *Chas. Hosford, M. D.
Wm. A. Lewis, M. D.

Litchfield County.

J. J. Newcomb, M. D. *J. H. North, M. D.
G. H. Miner, M. D. R. S. Goodwin, M. D.
*V. Buell, M. D.

Middlesex County.

Francis D. Edgerton, M. D. R. W. Mathewson, M. D.
Abraham M. Shew, M. D.

Tolland County.

G. H. Preston, M. D. Stephen G. Risley, M. D.
*C. B. Newton, M. D.

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* Absent.

It was then voted that all matters relating to unfinished business now in the hands of the society, or to be offered in regard to the same, be referred to a committee on unfinished business, to be appointed by the president.

The President then appointed the following committees:

Business Committee—C. A. Lindsley, M. D., C. W Chamberlain, M. D., M. C. White, M. D.

On County Resolves—S. C. Bartlett, M. D., John Witter, M. D., F. D. Edgerton, M. D.

On Gratuitous Students—J. B. Whitcomb, M. D., G. W. Preston, M. D.

To Nominate Essayists—S. G. Risley, M. D., G. L. Platt, M. D.

On Honorary Degrees and Honorary Members—E. K. Hunt, M. D., R. S. Goodwin, M. D.

On Unfinished Business—C. A. Lindsley, M. D., E. K. Hunt, M. D., G. W. Miner, M. D.

A recess was then taken to allow the county delegates to appoint members of the nominating committee, and after the meeting was called to order by the president, the following list was read:

Hartford County—C. W. Chamberlain, M. D.
New Haven County—B. H. Catlin, M. D.
New London County—A. Woodward, M. D.
Litchfield County—R. S. Goodwin, M. D.
Windham County—S. Hutchins, M. D.
Middlesex County—A. M. Shew, M. D.
Tolland County—G. H. Preston, M. D.,
Fairfield County———— ————.

The following communications, which had been received by the Secretary, were referred to the committee on County resolves:

On an International Medical Congress, D. G. Brinton, Cor. Secretary. S. D. Gross, President. On the metric sytem of weights and measures, from the Boston Society of Civil Engineers.

A protest from the Medical Society of the Distriet of Columbia, against a bill (before Congress) to incorporate a National Surgical Institute, of the District of Columbia. The committee reported that the Connecticut Medical Society would respectfully protest against the passage of said bill; also that it was at present inexpedient to take any action on the metric system, as few members of the society probably have investigated that system; they also reported in favor of sending delegates to the International Medical Congress, to meet in Philadelphia, Sept. 9, 1876.

The report was adopted.

Dr. J. C. Jackson, Treasurer, presented his annual report which was read and referred to an Auditing Committee consisting of J. F. Barnett, M. D., S. G. Risley, M. D., who after due examination reported its approval.

The report was accepted and ordered on file. The following is a synopsis, viz:

May 1875—Balance in Treasury,	$439.73
" 1876—Received during the year,	362.51
Total,	$802.24
Disbursements during the year,	574.76
May, 1876—Balance on hand,	$227.48

Dr. G. L. Platt presented the report of the committee of examination, and made remarks on medical education, followed by a general discussion. The report was accepted and referred to the committee on publication. (See Appendix A.)

On motion of Dr. A. W. Barrows, it was voted that so much of the president's address as related to medical education, and all other communications on the subject be referred to a committee on medical education.

The president appointed A. W. Barrows, M. D., A. Woodward, M. D., W. L. Bradley, M. D., who recommended,

"That each county medical society be requested by the Secretary to appoint a Board of Censors, to whom shall be referred the evidences of the qualifications of such young men as propose to commence the study of medicine. It shall especially be the duty of this board to pass upon the qualifications of all applicants for a gratuitous course of lectures, and the county societies are requested to recommend only such persons as have been approved by the Board of Censors."

The report was accepted.

An invitation from Dr. G. B. Farnham, to meet with him at 8 o'clock P. M., was received and accepted.

The Nominating Committee made their report, and officers were elected as follows:

President—A. W. Barrows, M. D., of Hartford.
Vice-President—Robert Hubbard, M. D., of Bridgeport.
Treasurer—F. D. Edgerton, M. D., of Middletown.
Secretary—C. W Chamberlain, M. D., of Hartford.

On Committee of Examination.

George C. Jarvis, M. D., H. E. Gates, M. D.

On Committee to Nominate Professors in the Medical Institution of Yale College.

J. C. Jackson, M. D., B. W. Catlin, M. D.

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

C. F. Sumner, M. D., E. B. Nye, M. D.

Committee on Matters of Professional Interest in the State.

C. A. Lindsley, M. D., W. A. M. Wainwright, M. D., H. W. Buel, M. D.

Committee of Publication.

C. W. Chamberlain, M. D., *ex-officio*, G. W. Russell, M. D., W. L. Bradley, M. D.

Committee of Arrangements.

G. W Russell, M. D., Anniversary Chairman, H. P. Stearns, M. D., W. A. M. Wainwright, M. D.

Dissertator.

A. M. Shew, M. D.

Alternate.

R. S. Goodwin, M. D.

Dr. M. C. White tendered his resignation as Secretary, in order to enable the Secretary elected for next year to edit the proceedings this year, which commences a new volume. The resignation of Dr. White was accepted, and it was voted that C. W. Chamberlain, M. D., Secretary-elect, commence his duties on the following morning.

Delegates to the American Medical Association for 1877.

Moses C. White, M. D., Samuel Lynes, M. D., A. M. Shew, M. D., H. P. Stearns, M. D.

Alternates.

C. A. Lindsley, M. D., S. Hutchins, M. D.

Delegates to the International Medical Congress.

Pliny A. Jewett, M. D., B. W. Catlin, M. D., A. Woodward, M. D., G. W. Russell, M. D.

Delegates to the Maine Medical Association.

C. M. Carlton, M. D., Lewis Williams, M. D.

Delegates to the New Hampshire Medical Association.

J. C. Jackson, M. D., H. M. Knight, M. D.

Delegates to the Vermont Medical Society.

William Woodruff, M. D., R. W. Matthewson, M. D.

Delegates to Massachusetts Medical Society.

Charles Horsford, M. D., S. G. Hubbard, M. D.

Delegates to the Rhode Island Medical Society.

T. Morton Hills, M. D., William A. Lewis, M. D.

Delegates to the New York State Medical Society.

Robert Hubbard, M. D., E. F. Coates, M. D., Francis Bacon, M. D., E. K. Hunt, M. D., Rufus Baker, M. D.

Delegates to the New Jersey Medical Society.

H. S. Fuller, M. D., C. A. Lindsley, M. D.

Delegates to the Pennsylvania Medical Society.

A. R. Goodrich, M. D., Charles W. Pinney, M. D., A. B. Haile, M. D.

Voted, That in case the Secretary is informed in writing that any of the delegates to the American Medical Association cannot attend, he may issue certificates to reserve delegates to fill vacancies.

Voted, That the Secretary be authorized to appoint substitutes for any of the delegates to the State Societies when the original delegates cannot attend.

Dr. E. K. Hunt proposed the following resolution to be acted upon at the next annual meeting, viz. :

Resolved, That the By-laws be so altered as to make the Treasurer, *ex-officio*, a member of the Committee of Publication.

On motion, it was voted that the thanks of the Society are hereby

tendered to Dr. J. C. Jackson, for his long and eminently valuable services as Treasurer of this Society.

It was also, *Resolved*, That the thanks of this Society be tendered to Dr. M. C. White, for his faithful services during the past twelve years, as Secretary.

Voted, That the annual tax be two dollars, payable June 1st, 1876.

Voted, That 500 copies of the proceedings be published this year.

The Committee on Honorary Degrees and Honorary Membership, reported no candidates to be presented.

The report was accepted.

The Committee on Gratuitous Students, made their report, and the following are approved by the Society to attend a gratuitous course of lectures in the Medical Institution of Yale College during the winter term of 1876–7:

Wm. C. Welch, of West Winsted.
Franklin W. Hall of Killingworth.
Wallace W. Dean of Riverton.

The Committee on Unfinished Business, reported that the only business brought to their notice was that relating to honorary membership. The committee have given careful consideration to the subject, and find that by the laws of the Society, the nominees are not eligible for election to honorary membership. The law on that subject requires that the election shall take place one year after the nomination, and not otherwise.

C. A. LINDSLEY,
E. K. HUNT,
G. W. MINER,
} *Committee.*

The report was accepted.

On motion, the Annual Meeting of the President and Fellows was adjourned to meet at Hartford, at 3 P. M., the fourth Wednesday in May, 1877.

Attest, MOSES C. WHITE,
Secretary.

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held in the Common Council Rooms, City Hall, New Haven, May 25th, 1876.

The Convention was called to order by the President, Dr. Phny A. Jewett of New Haven, at 9.30 A. M.

The Secretary then read the list of officers of the Society, and presented the following names of new members admitted during the year through the various County Societies.

Newton S. Bell, M. D., Burlington, Vt., 1864, Windsor.

H. G. Howe, M. D., Burlington, Vt., '73, College Physicians and Surgeons, N. Y., 1875, Hartford.

Henry E. Way, M. D., ———— Bristol.

Joseph Coogan, M. D., Bellevue, 1876, Hartford.

Isaac R. Sanford, M. D., Yale, 1875, New Haven.

J. F. C. Foster, M. D., Yale, 1875, New Haven.

Fred. O. White, M. D. Yale, 1873, New Haven.

B. S. Lewis, M. D., Harvard, 1875, New Haven.

F. W. French, M. D., Harvard, 1875, New Haven.

Edward S. Meers, M. D., Yale, 1874, New Haven.

James Olmstead, M. D., Yale, 1874, New Haven.

Geo. L. Beardsley, M. D., Bellevue, 1873, Birmingham.

Seth Smith, M. D., N. Y. University, 1875, New London.

W. T. Parker, M. D., Royal Ludwig Maximilian Uuiversity, Munich, 1873, New London.

W. P. Barber, M. D., Dartmouth, 1870, Lebauon.

G. H. Jennings, M. D., L. I. College Hospital, 1875, Griswold.

Frank A. Coates, M. D., College Physicians and Surgeons, N. Y., 1875, Mystic.

John Cotton, M. D., Harvard, East Woodstock.

F. X. Barolet, M. D., Victoria College, Montreal, Putnam.

F. Powers, M. D., College Physicians and Surgeous, N.Y., 1870, Westport.

S. P. Warren, M. D., Yale, 1874, Bridgeport.

M. C. Burke, Jr., M. D., L. I. College Hospital, 1875, S. Norwalk.

C. L. Blake, M. D., Yale, 1875, Essex.

R. M. Griswold, M. D., N. Y. University, 1875, Cromwell.
G. O. Johnson, M. D., Uuiversity Maryland, 1869, Clinton.
T. B. Bloomfield, M. D., College Physicians and Surgeons, 1876, Middletown.
A. W. Bell, M. D., University N. Y., 1874, Moodus.
Julian LaPierre, M. D., ————, Columbia.
J. W. Stevens, M. D., College Physicians and Surgeons, 1852, Norfolk.

The names of those members of the Society who had died during the ycar, were read, and obituaries presented to the Convention, which were referred to the Committee of Publication.

Dr. A. W. Barrows of Hartford, the Vice-President, then took the chair.

The Annual Address was then delivcred by the President, Dr. Pliny A. Jewett, on "General Hospitals in Conuecticut."

The thanks of the Convention were presented to Dr. Jewett for his interesting Address, and a copy requested for publication.

As a portion of the address was prepared for the Directors of the Hospital at New Haven, it would be inexpedient to divide the paper. It will, therefore, be published by the Directors of the Hospital, in separate form, and a copy will be sent to each member of the Medical Society.

A very able and interesting dissertation was then presented by Francis Bacon, M. D., of New Haven.

The thanks of the Convention were presented to Dr. Bacon, and the paper was referred to the Committee of Publication.

The Chairman of the Committee on Matters of Professional Interest in the State, Dr. C. A. Lindsley of New Haven, presented the report of the Committee, which was accepted and referred to the Committee of Publication.

An half hour was then taken in discussing Dr. Lindsley's report and in general business. The defects in our present system of registration of vital statistics, and the nomenclature of diseases adopted by registrars, were brought to the attention of the Convention in the report, and it was voted that a committee be appointed by the President to secure such legislation as would result in uniformity of classification of diseases with the system adopted by Public Boards of Health generally, and such revisiou of the laws concerning registration necessary to secure accurate and reliable sanitary statistics; it was also voted that the classification of diseases refer-

red to, be published in the transactions of the Society for the use of its members. The President appointed on this committee,

C. A. Lindsley, M. D., F. Bacon, M. D., G. W. Russell, M. D.

It was also voted that a committee be appointed to consider the expediency of pressing the subject of a State Board of Health this year, and the President appointed E. K. Hunt, M. D., C. A. Lindsley, M. D., C. W. Chamberlain, M. D. Dr. Hunt then read the following:

MINUTE CONCERNING THE DISCOVERY OF ANÆSTHESIA.

In reference to so much of the President's Address as relates to the Discovery of Anæsthesia, this Convention deems it proper to place upon its record at this time the unanimous conviction of its members, that to the late Dr. Horace Wells of Hartford belongs all the honor of this invaluable discovery.

The proof of this is established by numerous irrefragable facts now before the world, by the published opinions of many learned societies, and distinguished members of the medical profession and others, both at home and abroad, and by the unanimous verdict of the American Medical Association.

The above was approved and referred to the Committee of Publication.

The Delegates from other societies were then presented, with a brief address of welcome by the President.

A. Le Baron Monroe, M. D., from the Massachusetts Medical Society, William V. Wilson, M. D., from the Medical Society of New Jersey, who addressed the Convention.

An essay was read by Dr. C. W. Chamberlain on Laryngeal Phthisis.

The thanks of the Society were tendered Dr. Chamberlain, and a copy of the essay requested for publication.

Dr. B. W. Catlin then presented the report of the Committee on Sanitary Science.

The thanks of the Society were tendered Dr. Catlin, and a copy requested for publication.

Dr. I. W. Lyon presented an essay on Diphtheria.

The thanks of the Society were tendered Dr. Lyon, and a copy of his essay requested for publication.

The following papers were read by title only and referred to the Committee on Publication.

Reports of Interesting Cases—Dr. S. L. Chapman.

On the Nerve of Perception—Dr. G. W. Gray.

The Practice of Medicine Conducive to Health—Dr. Isaac Porter.

A Centennial Address delivered before the New London County Society—Dr. A. Woodward.

On Medical Ethics—Dr. B. B. North.

The Committee to nominate essayists reported the following names:

Dr. C. W. Gaylord,
Dr. R. Hubbard,
Dr. F. D. Edgerton,
Dr. Jas. Campbell,
Dr. S. G. Hubbard.

The Committee of Arrangements announced dinner at half past two P. M. Adjourned *sine die*.

C. W. CHAMBERLAIN, *Secretary*.

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

C. A. LINDSLEY, M. D., NEW HAVEN.

Your Committee adopted the plan, inaugurated a year ago, of issuing a circular containing a series of questions which might form the basis of communications. The partial success attending that method seemed to demand another trial of its merits. We have been disappointed chiefly in that an expectation of a largely increased correspondence has not been realized. But sufficient results have been obtained to justify continued confidence in it as the best. Your Committee believe that, with some modifications which experience can suggest, it will be the most effectual means of any yet proposed of cultivating in the profession in the State a habit of communicating important and valuable information for the general good.

The following questions were published, and supplied to the several reporters of the County Associations, in sufficient numbers for distribution to every member of the Society.

Questions.

1. What have been the prevailing diseases in your locality during the year ending in April, 1876?

2. Have any new or infrequent diseases occurred?

3. If "remarkable and instructive cases of disease" have occurred in your practice, will you please report them in writing to your County Reporter?

4. Can you distinguish Membranous Croup from Laryngeal Diphtheria?

5. In your opinion, is Diphtheria at first a local disease, which may at an indefinite time in its progress become general?

6. Or is it at first a general disease, or blood poisoning, of which the affections of the mucus membranes are merely secondary localizations?

7. Do you think Diphtheria can occur spontaneously, or in consequence of only such external influences as variable temperature and moisture?

8. Or is a specific *contagium vivum* essential to its production?
9. Is Diphtheria a contagious disease?
10. Have you observed the prevalence of Diphtheria to be influenced by the nature of the soil?
11. By the weather or the seasons?
12. By social relations?
13. By habitations?
14. What is the average duration of the disease in your fatal cases?
15. Have you observed good results from topical applications?
16. If so, what applications, and how made?
17. In what treatment have you most confidence?

The first three questions of the series are the same as proposed the previous year, and are of annual interest, as eliciting information respecting the actual state of health during the past year among the citizens of the commonwealth. The remainder relate to Diphtheria as a special topic of investigation, and are purposely so worded, that for the most part they can be answered in the affirmative or negative in monosyllables.

Your Committee hoped that while none were limited in the extent of their communications, the brevity with which it was possible to reply to the interrogatories would ensure a very general response to them. In that your Committee have been disappointed, the number of correspondents not exceeding much, if any, that of last year.

The reporters from every county in the State, excepting Windham, have sent in communications. No response whatever from any member of the profession in that county has been received, although repeated solicitations have been made to the reporter.

Although the reports received from individual members of the profession have not been as numerous as were desired, especially in regard to the subject of Diphtheria, yet in response to the first question relating to the prevailing diseases, the communications are from such intelligent correspondents, and from localities so widely distributed through the State, that a very fair and correct estimate of the sanitary condition of the people can be formed from them. From these reports it is quite evident that the general health during the past year, ending April 1st, 1876, has been at a perceptibly lower standard than during the year preceding. While no epidemic has prevailed, generally or in any section of our limits, in an extreme degree, still it is evident that nearly all the diseases which are usually most fatal to human life have claimed each a lit-

tle larger victimage than usual. If there is one disease more than another that would appear from the reports to be entitled to the character of a general epidemic it is Diphtheria.

That its more frequent mention by correspondents is not wholly because it is a special subject of enquiry in our circular, is shown by the report of the State Librarian on the vital statistics of the State, by which it appears there were reported 361 fatal cases in the year 1875, against only 158 in the year 1874. By the same authority it is shown that while there has been an increased fatality from all the zymotic diseases, except small-pox and scarlet fever, the excess of mortality from Diphtheria is far in excess of that from any other disease.

Pursuing the same method adopted in their report last year, your Committee submit a brief and condensed statement of the various reports received by them from the different towns, presenting them in the usual order of counties.

HARTFORD COUNTY—7 Towns Reporting.

Your Committee regret that the appointed reporter for Hartford County was content to report so briefly over his own signature; but he has atoned in part for this by contributing a valuable and instructive report of a case of pseudo-leucocythæmia, which will be read with interest. Your Committee have also received through him communications from seven of the twenty-nine towns in that county, and they respond to the enquiry about the prevailing diseases as follows:

Hartford—*Dr. Barrows.* "Diseases affecting the respiratory organs have occurred more frequently than any others in my practice. Influenza has been almost universal. Croup of a severe character has presented itself more frequently than for many years. Diphtheria has been quite common during March and April * * * of a mild type and short duration. Two cases of croup resulted fatally."

Dr. Lyon. "Besides the ordinary diseases in Hartford, I have seen more and more of those due to malaria. Intermitting fever is the usual form, but the neuralgias chiefly of the intercostal and supra orbital nerves, have been very frequent. In one case it complicated typhoid fever * * * the liver was tender, enlarged. * * * Quinine, thirty grains daily, arrested the chills, but unless continued in large doses, symptoms of dangerous prostration would appear. This patient took 24 grains of quinine daily for one month, after which it was gradually diminished. He made a good recovery." Dr. L. also speaks of the frequent relapses, unless quinine is renewed at intervals. * * * "During

the past winter diphtheria has prevailed to a considerable extent in Hartford."

Dr. Bowen has sent your Committee an elaborate and able article on an epidemic of catarrhal ophthalmia, occurring in Hartford during the past winter.

New Britain—*Dr. Swasey.* "The usual diseases, and during the past six months an epidemic of diphtheria."

Suffield—*Dr. Mather.* "The prevailing diseases in my practice have referred to the air passages, quinsy, laryngitis, bronchitis, pleurisy, and pharyngitis."

Wethersfield—*Dr. Warner.* "A little scarlatina in the spring of 1875, and a few cases in March, 1876. Typhoid and intermittent fever occasionally; through the summer and autumn more cholera infantum than usual. * * * September, diphtheria occurred, and has continued to prevail to some extent to the present time. In some families it was very fatal, three out of a family of six, in one, and three out of five in another, dying. * * Defective drainage was said to be a cause in one. I remember but two cases of pneumonia, both fatal. One case of cerebro spinal meningitis in June."

Plainville—*Dr. Moody.* "The past year has been a general time of health. * * * Nothing occurred of special interest to report unless it may be the treatment of carbuncles by strapping."

Rocky Hill—*Dr. Griswold.* "The only especially prevailing disease in the past twelve months has been intermittent fever in the summer and fall of 1875."

NEW HAVEN COUNTY.

The reporter for the New Haven County Association, Dr. W. R. Bartlett, has not sent to the committee the original reports of his correspondents, but instead has embodied them in his report, from which it appears that this county does not present any peculiar diseases, but seems to have suffered essentially the same disorders which have prevailed elsewhere. Malarial diseases of various types have prevailed generally. Besides these, in the order of their frequency, have occurred consumption, cholera infantum, pneumonia, scarlet fever, measles, diphtheria, croup, and typhoid fever. But, as Dr. Bartlett's report will be published in full in its proper place, I will not enter into further particulars on this point.

Dr. Bartlett's report is of additional interest from the consideration which he gives to the topographical, geological, and other local features of the county. As careful a description of the local characteristics of every county is very desirable.

NEW LONDON COUNTY—3 Towns Reporting.

Norwich.—The reporter for the New London County Association, Dr. Lewis S. Paddock, writes that in Norwich there has been the usual variety of diseases, although none have existed in the character of an epidemic. He gives a graphic account of the introduction of small-pox into Norwich, and how six of its citizens paid the penalty of death for neglecting one of the most ordinary and approved means of preserving health and life, viz., vaccination. Small-pox was introduced in December, 1875, and in consequence 15 cases of the disease occurred, of which 6 proved fatal,—most certainly a needless waste of health and life, and, from a scientific view, must be regarded in the light of a crime. In this age the constituted authorities in every civilized community should feel a sense of disgrace if small-pox is permitted to exist in it.

Mystic Bridge—*Dr. Coates.* "There has been no disease to prevail extensively in this vicinity during the last year. Typhoid fever and pneumonia were somewhat prevalent in the autumn of 1875, but generally the type was mild; but in North Stonington typhoid fever was very severe and fatal, the cases occurring mostly among farmers. The causes of its inception or fatality were merely conjectural. This same town, during the winter just passed, and among a farming community has been afflicted with diphtheria, also of a severe and fatal character."

Franklin—*Dr. Woodward* very kindly sends the committee a communication not in response to the circular, he having failed to receive it. He mentions treating a large number of cases of typhoid fever, all which recovered under a mild and supporting treatment.

He met also with three cases of typhus gravior, which terminated fatally. He writes: "The peculiar eruption was present in each case. All remedial agents seemed to glance off without impressing the patient favorably."

Variola appeared in several subjects, but of mild type and without fatal results.

Measles and erysipelas he speaks of as occurring with more than usual frequency, but without unusual phenomena.

Diphtheria has also prevailed, but of a mild and manageable form.

Cerebro-spinal meningitis occurred twice in his practice, in both instances with favorable terminations. Dr. W. also details an interesting case of vertiginous epilepsy under his care, with recovery.

FAIRFIELD COUNTY—3 Towns Reporting.

Dr. Wm. A. Lockwood, the appointed reporter for Fairfield County Association, sends your committe a full and interesting

report on the subjects of enquiry, accompanied by three communications from as many towns.

He writes that in the locality of

Norwalk, "The prevailing diseases during the past year have been malarious affections, diphtheria, pneumonia, and influenza. * * * There has been less 'fever and ague' than formerly, and generally a decrease in the various manifestations of this kind of disease."

Bridgeport—*Dr. Lauder.* "The past year has been one of more than usual freedom from the ravages of disease in this locality; the prevailing diseases have been neither widespread nor malignant, with the exception of diphtheria. * * * "This year the greatest number of deaths was from diphtheria, as was true the previous year. Fifty-two died from this disease the present year, while the year before the number was seventy-one. * * * A noticeable fact was that nearly all these cases resided in the southern portion of the city exclusive of the eastern district."

Ridgefield—*Dr. Todd.* "I have to report a year of great healthfulness. In August and September there were an unusual number of cases of cholera morbus and bad diarrhœas, but only a few cases of Dysentery. The last three weeks of March there has been an epidemic of influenza rather severe, and some pneumonia.

Westport—*Dr. Bouton.* Diphtheria, measles, scarlatina, influenza, and malaria.

LITCHFIELD COUNTY.

Dr. Ralph S. Goodwin, of Thomaston, is the appointed reporter for this county, and sends, as usual, an interesting and able report. He regrets his inability to obtain written communications from his professional brethren, but very satisfactorily amends the defect by taking the opportunity at the meeting of the County Association to propose the questions in the committee's circular to each of the members present. Upon information thus acquired he is enabled to give an authoritative account of the sanitary condition of the county. The towns represented were Litchfield, Goshen, Winsted, Wolcottville, Norfolk, Cornwall, Morris, Plymouth, Terryville, and Thomaston. No severe epidemic appears to have afflicted the residents in the county during the year. The following diseases, he writes, were most common and in the order of their prevalence:

1st. Diseases of the air passages, acute bronchitis, pneumonia, pharyngitis, croup, diphtheria, and influenza notably prevalent during February, March, and April.

2d. Scarlet fever, in the form of a mild epidemic, last summer

in Litchfield, last winter in Wolcottville, and now prevailing in Winsted and Thomaston.

3d. Typhoid fever and the slow fevers of a malarious type, he reports as uncommonly infrequent throughout the county.

4th. Diseases of the bowels were mild and infrequent during the summer.

5th. An importation of small pox from New York made two victims in Thomaston, but a prompt and thorough vaccination from house to house effectually prevented its extension.

These statements of the prevailing disorders are accompanied by much interesting and instructive remark by Dr. Goodwin, on the progress and treatment of the various maladies mentioned.

MIDDLESEX COUNTY—5 Towns Reporting.

Dr. D. A. Cleaveland is the reporter for this county, and accompanies his own report with several communications of interest from various towns in the county.

He writes in reference to prevailing diseases in

Middletown. "During the months of July, August, and September, dysentery prevailed to an unusual extent." This is the only mention made of dysentery by any of the reporters, except that Dr. Todd, of Ridgefield, speaks of its rare occurrence in that town.

"Intermittents until late in autumn. During the winter and early spring months, bronchial and catarrhal irritations. Diphtheria, to some extent, and a few cases of scarlatina."

Clinton—*Dr. Gray.* "The prevailing disease has been neuralgia, which I believe to be of malarial origin. There has been no epidemic, and indeed but little serious sickness."

Chester—*Dr. Turner.* "Prevailing diseases in this locality, pneumonia, diphtheria, intermittent fever, and an epidemic of mumps."

Essex—*Dr. Hubbard.* In the spring of 1875, a "hybrid," between scarlatina and measles, prevailed quite extensively in this community, one case proving fatal from meningeal complications." Besides, the Dr. mentions two cases of uræmic poisoning from exposure, attended with convulsions, and issuing favorably; also, the occurrence of between forty and fifty cases of diphtheria, with a mortality of twelve.

Middle Haddam—*Dr. Worthington.* "Typhoid fever, lung fever, an increase of malarial fever, rheumatism, less than usual of inflammation of serous membranes and more than usual of the mucus membranes. An increase of cutaneous diseases, especially of eczema."

TOLLAND COUNTY.

Dr. S. G. Risley, the reporter for the County Association, has forwarded to the committee his report, and a communication from Stafford, by *Dr. Newton*, in which he describes a prevalent form of pneumonia of peculiar type, and of all the respondents he alone declares there has been no diphtheria in his town. Dr. Newton's paper is interesting, and will be referred to the committee on publication.

WINDHAM COUNTY.

From this county your committee have only to report prolonged and profound silence.

Taking a general view of the above reports, it is to be observed that there is a close approach to uniformity in the diseases which have prevailed in all the various sections of the State. Almost the same list of acute affections have been reported from each of the counties. Malaria, diphtheria, and pneumonia have been nearly universal in their prevalence, while the exanthematous fevers have occurred in many localities, and usually in mildly epidemic forms. It is a noticeable fact in reference to these reports that *the* disease which far beyond all others is, and ever has been the most fatal to the citizens of Connecticut, in every part of its territory, namely, consumption, has been entirely overlooked, being not even mentioned in any of them. It is a forcible illustration of the old adage—"familiarity breeds contempt."

To Question 2d, regarding the occurrence of new or infrequent forms of disease, the respondents give an almost unanimous negative. If there are any exceptions, they are Dr. Hubbard's account of the "hybrid" between scarlet fever and measles, and Dr. Newton's peculiar form of pneumonia.

To the 3d enquiry, for interesting cases, there are several responses. But as they will be published with "Proceedings of the Convention," your committee will only mention by title the more important ones.

1. A case of pseudo-leucocythæmia, by Dr. Wilcox, of Hartford.

2. A case of Basedow's Disease, syn. "Graves' Disease," Exophthalmic Goitre, by Dr. Bowen, of Hartford.

3. A case of Croupous Pneumonia, by Dr. Swasey, of New Britain.

4. Two cases of doubtful diagnosis, by Dr. Goodyear, of North Haven.

5. A case of trifacial Neuralgia of twenty-five years' standing, by Dr. Barnett, of West Haven.

6. A case of Aphonia, by Dr. Talcott, of Guilford.

7. A case of strangulated irreducible femoral hernia, by Dr. Harris, of Old Lyme.

Question 4th.

Can you distinguish Membranous Croup from Laryngeal Diphtheria?

We have the following responses:

Yes,	13
No,	3
Unless Diphtheritic deposits in Pharynx,	1
Except from the history of the case,	3
Doubtful,	2
With difficulty,	2
Total,	24

The above replies, although not as numerous as could reasonably be expected on a practical question, from a society numbering more than three hundred and fifty members, yet they are very significant. Although the general sentiment is very strongly in favor of a distinctive diagnosis, still only a bare majority have ventured to give an unqualified affirmative opinion. Coming, as these returns do, not from theorists, but from physicians in active practice, who are in the constant observation of these diseases, and during a period when their general prevalence was never exceeded in the State, they are of more than ordinary interest.

The subject has attracted a good deal of attention and several valuable papers have been contributed setting forth in detail the opinions of their writers. These will be referred to the Committee on Publication, and will no doubt appear in the printed "Proceedings." It would exceed the proper limits of this report to attempt any quotations from them.

Question 5th.

Is Diphtheria at first a local disease, which may at an indefinite time in its progress become general?

Yes,	8
No,	19
Total,	27

QUESTION 6TH.

Is Diphtheria at first a general disease, or blood poisoning, of which the affections of the mucus membranes are merely secondary localizations?

Yes,	19
No,	8
Total,	27

These two questions (fifth and sixth) are the converse of each other. They are as yet wholly theoretical and still subjects of investigation: the direct answers indicate how the profession are divided in opinion. Among the respondents they form the topic of a good deal of argumentation, which may be read with interest if not with profit.

QUESTION 7TH.

Do you think Diphtheria can occur spontaneously or in consequence of only such external influences as variable temperature and moisture?

Yes,	22
No,	11
Doubtful,	1
Total.	34

QUESTION 8TH.

Is a specific *contagium vivum* essential to its production?

Yes,	10
No,	22
Doubtful,	1
Total,	33

QUESTION 9TH.

Is Diphtheria a contagious disease?

Yes,	18
No,	4
Contingently so,	3
At times, yet seldom,	3
Not like small-pox and measles,	2
Total,	30

The last three questions, relating to the origin of the disease, are, like the two preceding, of vast importance if they were definitely settled, but they are yet too much involved in the mists of speculation to expect uniform replies from the busy every-day workers in our profession. And yet the replies are of interest as showing a thoughtful and shrewd consideration of them under the best light available. Upon reviewing the answers carefully there is more uniformity of opinion than could be expected, particularly on the last question, which is perhaps more simple and practical than the others. Of the thirty who have responded, eighteen give an unqualified opinion that diphtheria is a contagious disease, while eight others guard their affirmative opinion with conditions, and only four deny decisively the contagious property of this disease.

In respect to the four following questions concerning the influence of soil, weather, seasons, social relations, and habitations upon the existence of diphtheria, there is great uniformity of sentiment. Almost with one consent it is agreed that, in whatever regard these conditions are unsanitary, they would aggravate the dangers and perpetuate the existence of diphtheria, although not in themselves competent to originate it.

Question 14th.

What is the average duration of the disease in your fatal cases?

5 days,	3
6 days,	1
7 days,	6
6 to 12 days,	1
No average can be given,	2
Depending upon how they die,	1
Total,	14

The responses to this question are less in number than to many

others; many who have written upon other points declaring they have no experience with fatal cases. Very few replying directly and without qualifications.

Taking the general sentiment pervading the answers to this question, it seems evident that the two respondents who say "no average can be given," are probably right.

Dr. Griswold's remarks (of Rocky Hill,) upon this question well express the truth. He writes,—"The average duration of diphtheria in fatal cases will depend greatly upon how the patients die. If they die, strangulated from the presence of the adherent membrane in the larynx and trachea, preventing the entrance of air into the lungs, as some cases do; or, if they die asphyxiated from the secretion and accumulation of the ropy, though not necessarily adherent, diphtheritic exudation in the ramifications of the bronchial tubes, preventing the oxidation of the blood, as other cases do,—the duration may be twenty-four hours or a week and will average from four to six days. If they die from the prostrating effects of the poisonous influence upon the general system, as in some cases; or, if essentially from starvation in consequence of inability of deglutition or because the stomach persistently ejects nearly all that enters it, as in still other cases, you will have death on the average in about two weeks.

If they die from uræmic poisoning, the result of a suppression of the urinary secretion as a secondary effect of the disease, as in some cases under my care, it will be in two or three weeks from the outset of the diphtheria."

QUESTION 15TH.

Have you observed good results from topical applications?

Yes,	30
No,	2
None stronger than a gargle,	5
Only occasionally and in certain conditions,	1
Total,	38

The tabulated replies give but a very imperfect idea of the practice of the respondents, most of them accompanying their approval of local remedies with extended remarks concerning the medicines employed, and the manner of using them.

QUESTION 16TH.

What applications and how made?

It is not possible to tabulate the answers to this question in any satisfactory manner. No two correspondents have recommended the same thing in precisely the same way.

The articles most frequently mentioned are Astringents, and the Salts of Iron seem to be the most popular. Tannic Acid is in favor with a few; these are recommended in the dry state and in solution from saturated to weak dilutions. The Nitrate of Silver does not seem to enjoy the reputation it formerly had, but two respondents recommending it, one in saturated solution, the other weaker. The Chlorate Permanganate and Iodide of Potash have each their advocates, also the Hyposulphite of Soda and Iodine. Salicylic, Carbolic, and Hydrochloric Acids, the vapors of hot water, of opiated and camphorated water, of slaking lime. These agents are not only advised separately, but also in combination with each other in every variety of way, and in varied proportions. They are to be applied by inhalation, by insufflation, by washes, by gargles, by snuffs, with a camel's hair brush, with a sponge probang, with a syringe, and with the atomizer.

In view of this variety of practice in the use of topical applications, and the fact that the recommendation of no one of them is supported by such evidence of its superior value as to win our confidence, the very respectable minority who abstain from the use of topical applications may have very good grounds for their distrust of them.

QUESTION 17TH.

In what treatment have you most confidence?

It is pleasant to turn from the conflicting and confusing responses to the last question, and contemplate the almost absolute harmony and concord of sentiment which pervades the answers to this. With one accord they all agree that the guiding principle in the internal treatment, is to support the patient, to sustain and strengthen him, and if necessary to stimulate. And it is quite remarkable to observe with what unanimity they mention the same means to accomplish this end. Every writer, without exception, who gives particulars, speaks of the Tinct. Mur. Iron, and in liberal doses. Next in order of frequent mention is, the most

thoughtful attention to the administration of a nutritious and assimilable diet, and of this milk is the favorite element in the bill of fare. A most rigid attention to careful ventilation is generally insisted upon. As medicinal adjuvants to these measures, Quinine, Chlorate of Potash, Beef-tea, and Ammonia are often mentioned, while Calomel has still a few advocates, who advise it in the early stage in a cathartic dose, and its continued use in small doses as an alterative.

Another practice seems to have gained the respect and confidence of many physicians, viz. to charge the atmosphere of the sick room with vapor either of simple water or of slaking lime. A few think they can promote the favorable effect of this steaming process by the external applications of hot fomentations about the throat.

Thus have your committee attempted to summarize as concisely as the character of the work would permit, the reports on the sanitary condition of the citizens of Connecticut in its various parts, and to present to you the opinions and practice of the profession respecting the special subject of Diphtheria, so far as they have been expressed.

And your committee desire to record their thanks to the county reporters and their correspondents for their zealous and efficient assistance in this work.

There remains one or two other matters of professional interest to which your committee desire to call your attention briefly.

THE REGISTRATION OF VITAL STATISTICS.

This is a matter which quite obviously and properly falls within the notice of your committee as a matter of deep professional interest.

By the Statutes of Connecticut it is made the duty (among others) of the Registrar in every town, to send to the State Librarian, annually, on or before the 25th day of January, an abstract of his records for the preceding year. And it is made the duty of the Librarian to prescribe the form of such abstracts, and to prepare, or cause to be prepared therefrom, such tabular statements as will render them of practical utility—exhibit their results in convenient form, and make report thereof annually to the General Assembly.

The special point to which your committee respectfully request your attention is the form of the abstracts in use, and the neces-

sarily defective character of the tabular statements based upon them, and annually reported to the Legislature.

The State Librarian is not a medical man, and in all probability has continued in the use of the same classification and nomenclature of diseases as first adopted, because he has received no suggestions of an improved system from any authoritative source.

No one can doubt that the gentleman who has so long and honorably filled that office would receive with great respect and cheerfully comply with any proper requests emanating from the Connecticut Medical Society. And from no source within the state could advice upon this subject issue with greater propriety than from this Society.

Your committee would therefore propose that a committee be appointed to prepare the form of an abstract for the annual reports of registrars, which shall be in accordance with the system which is adopted by the United States Marine Hospital Service, and by the Medical Department of United States Army, which was also endorsed by the American Medical Association in 1873, and again recommended for purposes of public registration, by the American Public Health Association. It is the same system used generally in Europe, and first proposed by an International Statistical Congress.

Further, that this committee be instructed to communicate with the State Librarian, and in behalf of the Connecticut Medical Society respectfully request him to adopt for future use the classification and nomenclature recommended.

It is also advised by your committee that the classification and nomenclature to be recommended shall be published with the proceedings of the society for the benefit of its members.

STATE BOARD OF HEALTH AND VITAL STATISTICS.

In the last report of your committee one year ago it was stated that the commission appointed by the governor of the state, pursuant to an act of the legislature, had reported to the legislature then in session, favorably for an act establishing a State Board of Health and Vital Statistics.

The report of the said commission recommending such a board, was not acted upon, finally, by the General Assembly of 1875, but was laid over, and will come up during the present session as unfinished business. It seems eminently proper to your committee that, whereas this society originated the effort to establish such a

board in the state, and with all its influence urged the appointment of the commissioners to present the matter to the General Assembly, therefore, it should still continue to exercise a protective and watchful care over its interests, and authorize some of its members to use such proper influences in its behalf as will secure favorable action upon it by the present legislature.

All of which is respectfully submitted.

C. A. LINDSLEY,
W. A. M. WAINWRIGHT,
H. W. BUEL,

Committee on Matters of Professional Interest in the State.

HARTFORD COUNTY.

Dr. Charles A. Lindsley,

Chairman of Committee on Matters of Professional Interest, &c.

I am fortunate in being enabled to send you several interesting and important contributions to the subject of Diphtheria, as developed and directed by your series of questions—also a few "cases of interest." The only epidemic influence that has had lodgment in the county the past year, has been Catarrhal, and this widespread, and very active, but not often fatal; manifesting itself by the symptoms peculiar to the organ involved.

Its Ophthalmic seizure has been well described in a paper by Dr. Bowen. Very truly yours,

L. S. WILCOX,
Reporter for Hartford County.

A CASE OF PSEUDO-LEUCOCYTHÆMIA—WUNDERLICH.

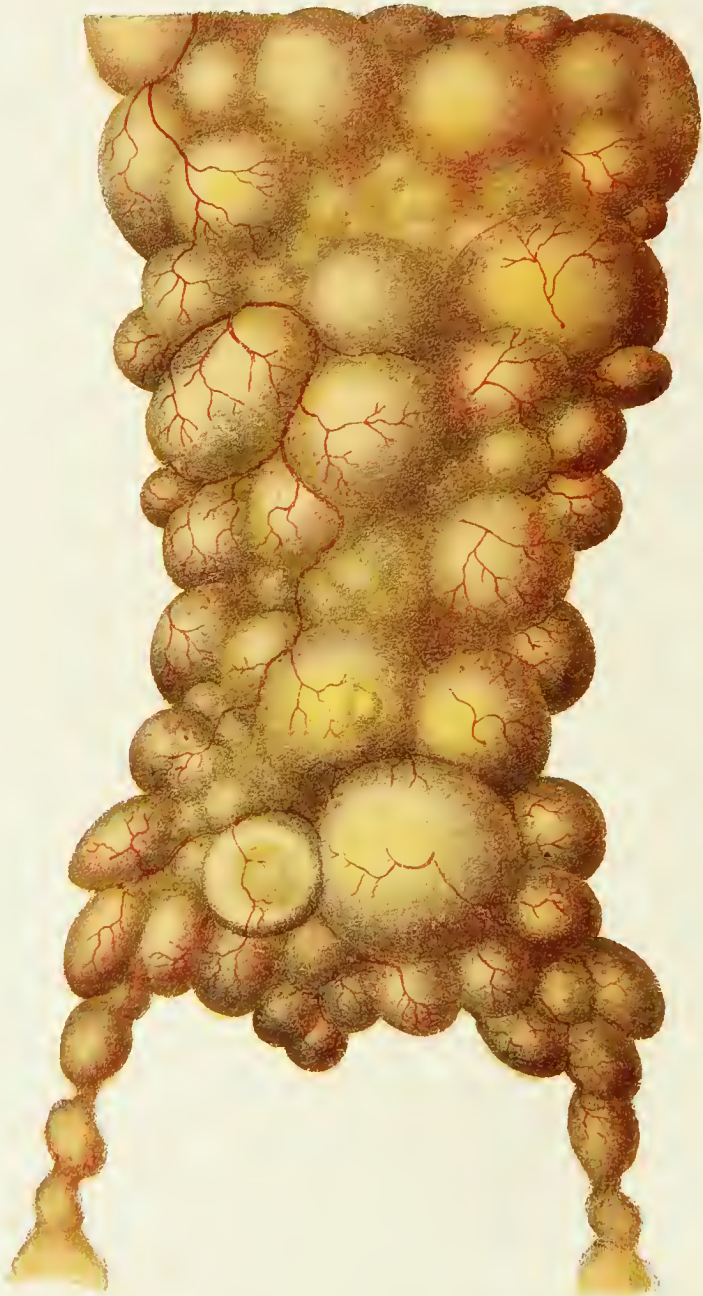
Hodgekin's Disease—Trousseau's Adenia.

By L. S. Wilcox, M. D., Hartford.

Mr. J. H., a student, age 26, came under my observation September 9, 1875. He remembered that at graduation in 1873, (his friends say two years earlier,) he was suffering from an enlarged lymphatic gland in the arm-pit. He spent a year West in a malarial region, and returned subject to attacks of debility without any known cause.

During the past year, these attacks had been growing both more severe and more prolonged, at times confining him for a week or more. I found him in bed, a well-formed man, with dark hair, eyes, and complexion, and ruddy cheeks and lips, muscles soft, skin dry and furfuraceous to an extreme degree—numerous very large lymphatic glands in both axillæ, and all about the neck. Spleen not enlarged, nor the liver—heart and lungs sound—abdominal walls shrunken, tense and inelastic like a slackened drum head, pulse and temperature normal, tongue a little red, and slightly covered with a yellowish coat; bowels constipated, and if moved by injections, the injections gave great pain; urine normal in quantity and quality.

He complained of debility and a distressing sense of fatigue. He was chagrined because he could not find cause for his constant weariness. In the early part of every night he suffered severe pain in the splenetic region and right hip, nowhere else. His appetite was generally good,



and food did not distress him; mind, hopeful, but impatient. The nature of the malady was suspected, but not made clear, until its course and symptoms had been observed for several weeks.

The normal urine, and the normal ratio of the white and red corpusceles of the blood were inconsistent with the theory of true Leucocythæmia, while false; that is Pseudo-Leucocythæmia, which it proved to be, could not be satisfactorily established without the element of duration.

His pain early yielded, apparently, to tonic remedies—Iron and Quinine, and especially, Phosphorus.

Thenceforward the disease advanced by successive alternate stages of improvement and relapse. His appetite and digestion continued good and firm to the end, the early constipation yielding to free, and, at last, to too frequent movements of the bowels. His eyelids became, for a time, swollen and reddened, and somewhat suppurative with Erythema, and spots of Ecchymosis appeared in small numbers upon his limbs. The pulse was normal till a week before death, when it rose to one hundred or more, to fall back to natural, and then to rise and fall at intervals. His temperature was never above 98°, and the last month of his life, usually one or two degrees below. The last two or three days, the thermometer at 95° was not affected.

Six weeks before death there was a very slight anasarca, so uniformly diffused as to give the appearance of increasing flesh. Ere long this general dropsy as it increased, began to have favorite deposits, principally in the vicinity of the larger joints, but at last, the fluid seemed to be gathered up from all other parts, and poured in immense quantities into the pleural cavities, and to some extent, into the pericardium, thus precipitating death.

This case of Pseudo-Leucocythæmia in contrast with a case of Leucocythæmia, presented in the Transactions for 1871, exhibits these points.

Pseudo-Leucocythæmia	Leucocythæmia
1. No initial lesion.	1. An initial lesion.
2. Ratio of red to white corpuscles, normal.	2. White to red corpuscles in ratio of one to ten, as early as two months before death.
3. Uric acid in urine, not in excess.	3. Uric acid so copious as to deposit before the urine cooled.
4. No apparent fever, and temperature not increased, and for two weeks before death, below natural.	4. Several exacerbations of fever every twenty-four hours, and the temperature at such times, 104 and 105°.
5. Enormous proliferations of glandular tissue, both external and internal.	5. Scarcely none external, and not to an "enormous" extent internal.
6. Mind, as the disease advanced, reposeful, cheerful, and clear, to an unusual degree	6. Mind, reposeful, cheerful, clear, and even tenuous to a degree indescribable, as if it were nectarious air its body had fed upon.

Post Mortem—Nine hours after death—by Dr. Chamberlain.

Rigor Mortis absent, body greatly emaciated, a furfuraceous condition of the epidermis, moderate œdema of the extremities especially the lower, suggillations in dependent portions of the body, anterior portion of the neck bluish purple. The axillary glands were greatly enlarged, one quite as large as a pullet's egg, the cervical all markedly enlarged, the inguinal to a less degree; the enlargement was more decided on the left side of the body. There was also a decided enlargement of the bones of the left knee joint, inner aspect, and of the head of the right fibula.

There was scarcely any adipose tissue discoverable, the muscular was of a healthy color. *Thorax*—the lungs were fairly filled with air,—slightly oedematous, lower portions of both lobes splenified, sinking in water, there were no adhesions; each pleural cavity contained about a quart of clear serum. The bronchial and tracheal glands were enlarged from the size of a pea to a black walnut. A glandular growth covered the posterior surface of the sternum especially the upper portion, and a chain of enlarged lymphatics near sixth intercostal space, right side. The pericardium contained about three ounces of clear serum; there was no evidence of inflammation. The valves were normal, heart measured length three and a half inches, breadth two and three-quarter inches. The blood in the heart was fluid, which was the condition throughout the body. *Abdominal Cavity.*—Spleen hard and nodulated, capsule thickened apparently normal in size. The left kidney was somewhat enlarged and hard, the right apparently healthy. The mesenteric glands were all greatly enlarged.

There was a large glandular mass occupying the situation of the attachment of the mesentery lying over the abdominal aorta, and covering it laterally, dipping down on each side of the spine. This growth involved the tail of the pancreas, it was not adherent to the duodenum. The mass extended to the promontory of the sacrum where it divided, sending off branches right and left, which became continuous with the line of glands over Poupart's ligament. The character of this growth is well shown in the accompanying plate.

Microscopic examination of the growths showed them to be of a glandular nature—hypertrophied glandular tissue.

A CASE OF BASEDOW'S DISEASE.

("Graves' Disease." Exophthalmic Goitre.)

By Wm. Shaw Bowen, M. D., of Hartford.

This remarkable affection has received numerous names from the various authors who have described it since St. Ives first wrote in 1722. To Dr. Graves, in 1829, is due the merit of modern research, and he was followed by Dr. Basedow, who gave the most complete account. It is

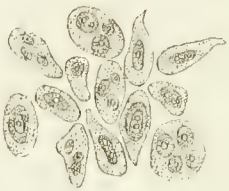
rare in this country, and still rarer is there corneal complication. The disease occurs most frequently in females, and at any period of life; although, usually at an advanced age in the case of males. The Swiss Alpine valleys, and the plains at the base of the Andes, are noted for the prevalence of the affection, but it is found in isolated cases in all parts of the world. A patient recently under my care has afforded an unusual opportunity for studying a typical case, with several of its complications.

Mrs. R——, aged 34; married ten years; the mother of seven children, five of whom are living. Since the birth of the last child about a year ago, has suffered from general anæmia. Is small and delicate in person, and of a highly nervous organization. Suffered from irregular menstruation and dysmenorrhœa for many years, and until the birth of the fourth child. Observed shortness of breath and palpitation of the heart shortly after the birth of the last child, and these symptoms increased instead of diminishing after her recovery, which was very slow. There was extreme nervousness, irritable and capricious temper, palpitation, and throbbing of the bloodvessels, flushing and fulness of the face, head, and neck. Then there appeared an enlargement of the thyroid gland, accompanied by a sensation of pressure on the throat; insomnia, and a peculiar pearly appearance of the eyes. The child was weaned, and menstruation returned, but scanty and irregular in amount. The pulse, when first counted by the family physician was 105, but when she came under my observation it was ranging from 120 to 125, according to the hour of the day, or upon physical exertion. At this time there was marked protrusion of the eyeballs, and this had existed for several days. The sclerotica were of a pearly, transparent blue, without any traces of congestion; the tension of the globes was normal. Vision of the right eye when tested on Snellen's Types $= \frac{15}{20}$ of normal; the left eye $= \frac{15}{15}$, or normal. The throat was prominent in the region of the thyroid body, which could be felt enlarged and movable under the distended integument. It was symmetrical in its growth, and gave a not unpleasant fulness and roundness to the throat. She has had swelling of the feet and breasts, but this is not now marked. She notices that the protrusion of the eyeballs increases when she holds her head down for any considerable time, as in sewing. Is in an excited state and burst into tears while describing her sufferings. The eyeballs are usually protruded downwards and forwards in this disease. Their movements are usually restricted, and the sclerotica, brilliant in color, is so much exposed that a wild and startled expression like that of an animal is given to the face. The ophthalmoscope shows the fundus oculi congested, with small pigmentary deposit in the neighborhood of the optic disc. Von Graefe has found choroidal congestion; and fulness of the retinal vessels has been observed by various writers, but usually the tissues of the eye are unaffected. Both the eyeballs are equally protruded; and this is gen-

erally the case; it is not, however, invariable in the disease. Cases are recorded where first one and then the other are more prominent; and Praed has given three cases in which the affection was confined to the right side. Three days after the first visit made at my office, there appeared on the outer edge of the right cornea a small patch of infiltration, and increasing pain and photophobia gave warning of approaching corneal ulceration. This is to be feared for two reasons: 1st. Exposure to irritants floating in the atmosphere, which lodge on the cornea partly uncovered from inability to entirely close the lids on account of the protrusion; and, 2d, from pressure, the eyeball being pushed forward between the lids with such force as to be strangulated. Then, the nutritive powers are at a low standpoint and a predisposition to inflammatory diseases exists. Von Graefe, observing this unfortunate sequel to a number of cases, provided for it by paring the outer edge of the upper and lower lids, and, bringing the raw surfaces together, united them firmly by sutures. The shortened palpebral orifice prevented protruding of the globes, and a firm support for them is thus afforded. In the case of Mrs. R—— this procedure would have been followed had the following treatment failed. The lids were brought together firmly by strips of plaster and secured, a solution of atropiae sulphate having been previously instilled. A pad of charpie was fitted in the irregularities and depressions of the orbit, and a "Liebriech pressure bandage" applied over all. The next day gave a great sense of comfort to the patient, and when the bandage was removed two days after, the corneal opacity had diminished and the exophthalmos likewise was less apparent. She has gradually improved under treatment, and is now very much relieved. The exophthalmos has entirely gone, and the thyroidal enlargement has decreased. The pulse is less than 95 per minute, the eye complication passing away. She no longer presented herself to me, and is now in New York for general treatment for the anæmia. The treatment in such cases varies exceedingly, and such a diversity of opinions prevail, and so many writers of repute have expressed such antagonistic views, that it is not to be wondered that much confusion results, and a great lack of practical detail. It being a disease dependent upon the anæmic condition, tonics are invaluable, and upon them and sedatives we must chiefly depend.

When the affection was first recognized in the last century, the fashions of the day were carried out, including, of course, free bloodletting. Iodine was applied to the enlarged thyroid; its effects are, however, usually bad, and it is asserted that the swelling may be thereby increased.

Chalybeates were first advocated by Begbie, who used them with success, but Von Graefe forbids their use when there is much vascular excitement, and the pulse over 100. Trousseau thinks iron is objectionable, and is especially fond of digitalis, which was used by Begbie. He also advocates hydropathy, and ice to the thyroid.



There can be no doubt that digitalis is one of the most invaluable of remedies, and in this case, its effects were very satisfactory combined with tonics. The physical cause of the exophthalmos is not yet definitely agreed upon, and the various authors run riot on this theme.

Dalrymple taught that it was due to an "absence of a proper tonicity of the recti muscle," by which the eye is retained in its place in the orbit. R. Taylor thought it due to "spasms of the cervical muscles impeding venous return from the head, and producing turgescence of the orbital veins;—Desmarres, an extraordinary accumulation of fat in the cavity of the orbit." Begbie, "congestion and vascular dilatation of the ophthalmic vessels."

Aran, irritation of the sympathetic, affecting the orbital muscle. Dr. C. J. B. Williams, enlarged orbital and cerebral circulation. Trousseau is undecided, and does not express positive opinions.

Virchow says there is "hypertrophy of the fatty tissues of the orbit." The most generally accepted pathology is that of Basedow, an older writer, who, with Neumann and others, consider the protrusion due entirely to "hypertrophy of the post-ocular cellular tissue." The post-mortem appearances are always unsatisfactory, the hyperæmic swelling being controlled by pressure during life, and disappearing after death.

The causes are, as has been before mentioned, intimately connected with debility, and suitable treatment usually produces a cure.

CANCER OF THE HEAD OF THE PANCREAS.

Geo. C. Jarvis, M. D., Hartford.

Mrs. C., aged 58, mother of seven children, had always been in good health, and, with the exception of a mild attack of typhoid fever six years previously, her general condition of health remained uninterrupted until four years before death. She then commenced to have at intervals, varying from three weeks to six months, attacks of what was apparently neuralgia of the stomach. These, after two years, became more frequent, accompanied with severe pain, and frequently with vomiting. Her attending physician suspecting biliary calculi, the feces were carefully watched, but no traces were ever found so this idea was abandoned. Six months ago a slight sallowness appeared, and there was an obstructed condition of the bowels which lasted for nine days, with frequent and persistent vomiting. From this time no natural movements were passed, they were clay colored with shreddy mucous, often bloody and attended with pain. The vomiting now became a marked feature of the case, and the severe pain in the epigastric region almost constant. The extreme tenderness rendered a thorough physical examination impossible, while the tympanitic condition and thickness of the abdominal walls were additional difficulties; however, an increased area of dullness in the

right epigastric region, was distinctly made out. The patient gradually sank, and died April 26.

Post Mortem.—Ten hours after death—by Dr. Chamberlain.

Body well nourished, *rigor mortis* well marked. Heart and lungs normal.

There was no evidence of any ulcerative or other disease of the stomach. The head of the pancreas was enlarged, very hard and firm to the touch, cutting almost like cartilage; by its increased size and consisteney, the *ductus communis choledocus* was almost occluded near the junction with the pancreatic duct, the duodenum about the entrance of the common duct was somewhat hardened. There was no obstruction of the gall duct between pancreas and liver. The liver was enlarged, the lower portion of the right lobe hardened, the left lobe softened and friable; scattered about the surface and interior of the liver were hard, firm nodules, varying in size from a pea to a chestnut, of irregular outline, and some of them surrounded by a congested border.

There was no evidence of peritonitis, the colon was considerably congested and exhibited a marked thickening at the sigmoid flexure.

The other organs of the body were healthy.

Microscopical examination of the growth in the pancreas and the nodules in the liver showed them to be alike, of a cancerous nature. A fine delineation of the appearance of the liver is presented in the accompanying plate.

DESCRIPTION OF AN EPIDEMIC OF CATARRHAL OPHTHALMIA OCCURRING IN HARTFORD DURING THE PAST WINTER.

Wm. Shaw Bowen, M. D., of Hartford.

During the past winter, and extending into the month of March, an epidemic of catarrhal irritation and inflammation of the eyes has prevailed in Hartford and its vicinity. The disease has varied from a moderate hyperæmia of the conjunctival vessels, to acute and violent suppurative inflammation, which, in certain cases, extended to the cornea and deeper parts, or gradually resolved from its acute stage, and terminated in chronic hypertrophy of the follicles of the lining membrane of the lids, forming the condition known as "trachoma" or "granular lids." Inflammation of the conjunctiva, in common with those of all mucous membranes, is attended by morbid discharges; and it is indeed one of the most marked phenomena. When mild in degree, the secretion is chiefly mucous or epithelial. This "scarcely mingles with the tears, but lies rolled up, as it were, beneath the lids, and may be drawn out in shreds." It is thinner and more transparent the slower the inflammation proceeds. When there is greater vascular disturbance, especially when quickly developed, the corpuscular element is more apparent. Next may follow a

greenish-white, creamy discharge, from the preponderance of pus cells. There is interstitial exudation, serum is poured out, and the liquor sanguinis, with its albumen and fibrin increasing with the intensity of the inflammation. Swelling may then ensue. Hemorrhage into the parenchymatous connective tissue, from rupture of capillary loops, is not infrequent. The swelling usually increased until the inflammation had reached its height. The palpebral conjunctiva usually swells irregularly and least because it is the more closely bound down. The more common variety of the disease, seen during the epidemic, was the simple mucous catarrh of the conjunctiva. It usually ran its course without doing mischief to the ocular appendages, and the discharge was slight, chiefly mucous; and when pus appeared, it was in small quantities. The conjunctiva, meibomian glands, canals, and the lachrymal ducts, were involved. The symptoms were itching, a feeling as of sand in the eyes, and occasionally slight intolerance of light. The lids were gummed together in the morning, the palpebral and ocular conjunctiva was injected, and had a brick-dust hue. The vascular network of vessels on the eye-ball was plainly mapped out, and presented the distinctive features of superficial inflammation. The conjunctiva swelled slightly, the villi being engorged and turgid, and an uneven surface presented, which is a common effect in swollen mucous membranes, readily seen in the pharynx, a slight inflammation causing it to look irregular. Chemosis was rare, and the conjunctiva did not adhere to the cornea. The ordinary moisture of the eye was increased at first, and then mucous appeared. If the disease did not then abate, the discharge grew thicker and yellowish. The mucous variety ran into the purulent without any warning. There might be a trace of mucous only in the palpebral folds, or it was so profuse as to glue the lids together, and be scarcely distinguishable from purulent ophthalmia. Photophobia was rare, and unless the cornea was involved, only moderate lachrymation. There was also an absence of pain, and no deterioration of vision, save occasionally a slight haze from impairment of the corneal epithelium. There were no constitutional symptoms dependent upon the ophthalmia, although the eye affection frequently accompanied an influenza or a catarrhal attack. Both eyes usually shared in the process, although not always together. Sleep was not interfered with save from anxiety, which sometimes accompanied the case. The duration was from three or four to ten days, and without treatment, from a fortnight to three weeks in severe cases, which terminated in resolution or merged into a chronic form with thickened and granular conjunctivæ. The causes were atmospheric, aggravated by smoke, bad inhalations, crowded rooms, drafts, wet, cold, and exposure to inclement weather. Cases of unrelieved presbyopia or hypermetropia seemed predisposed to the affection, a fact noticed by German writers when describing the same disease, and also by Haynes Walton in England. Irritation from the throat and nasal passages extending to the

eye through the anatomical connection, the nasal duct, and the canaliculi, was another cause. It was decidedly epidemic. In one building in this city sixteen cases existed at the same time. The writer saw seven members of a family, inmates of the same house, in the course of a week, and thirty-four new cases in one day. It was infectious. When one member of a family contracted it, the others were apt to be affected. I am not aware of any marked appearance of the disease in the public institutions of the city. The treatment was simple: cleanliness and care as to hygienic surroundings was first impressed; also rest of the eyes and confinement to the house in bad weather. Mild astringents were used locally, and a saline purge was found useful. If the discharge markedly increased, with a tendency to purulency, a solution of argenti nitras, gr. x–xx in the f℥j, was penciled on the lids, and afterwards neutralized by a chlorine solution. Warm fomentations were advised if there was undue irritation. The best method of applying the silver solution is to charge the soft camel's hair pencil with it and draw it across the conjunctiva of the everted lids; they should then be closed for a moment, and another brush, wet with a solution of chloride of sodium, applied in the same manner. The eye should then be rinsed with clean, warm water.

In the cases where there was little or no discharge, the application was milder. Biborate of soda is a favorite dissolved in camphor water. The cornea should always be carefully watched in these cases, a small abrasion or ulcer may suddenly appear, and then astringents are positively contra-indicated. When there is the slightest disturbance of the corneal epitheleum amounting to a breach of surface, all preparations containing lead or silver should be abandoned. An insoluble precipitate of lead may be lodged on the denuded surface, owing to chemical decomposition in the tears, and a permanent and unsightly "Leucoma" or corneal opacity be formed. Indeed lead had better be abandoned in ophthalmic practice for this reason, and, if preferred, should never be entrusted to the patient for indiscriminate use, but applied by the physician only. I generally advise that the lid should be greased at the edges at night with cold cream to prevent the discomfort of sticking together. The disease sometimes would not pass away with the use of the remedies above mentioned, and when there was no treatment, but would merge into a severer type of purulent ophthalmia. It was simply a more intensified form than the mucous variety, and there was risk of serious mischief to the eye. The mucous discharge gradually changed to purulent matter, which, when mingled with tears, overflowed and excoriated the cheeks. The palpebral conjunctiva swelled and had a velvety appearance. The ocular membrane was also inflamed. It was of a dark red, and the vessels not so plainly mapped out. The lids were apt to swell, and there was also hot scalding pain, sometimes extending to the brows and temples, where it was more of a neuralgic character. The

lids were encrusted with thick yellow matter, and the eye lashes bound down and together. Both eyes were affected at once. There was sometimes chemosis owing to serous exudation beneath the conjunctivæ, and the folds of the latter sometimes overlapped the cornea, partially obscuring it. Chemosis arises from two causes; infiltration of the conjunctiva itself; and inflammation and infiltration of the subconjunctival or episeleral tissues. The two have been distinguished by an English writer as "hard and soft chemosis," the "hard" to distinguish it from the "soft" chemosis of the mucous type of the disease. "Hard chemosis is indicative of a high degree of inflammation, and which inflammation generally spreads to the areolar tissue of the orbit, so that the eye-ball is sometimes slightly protruded."—(Walton.) The lids would continue to swell, the upper slightly overlapping the under.

There was now great risk of corneal complications, and in a number of cases the inflammation extended to the iris, and the uveal tract. One of the worst cases of irido-choroiditis that ever came under my observation arose in this way, and three iridectomies were performed before relief was found. But the most common termination was in resolution, without involving the interior of the globe or the cornea. The discharge might continue for several days with little change, and then grow thin, the chemosis disappear, and gradually, the redness of the ocular conjuctiva.

There was a risk, however, of the lids becoming "granular," the papillæ having undergone morbid changes forming the condition known as "trachoma," that in time might, if neglected, injure the cornea from mechanical irritation, and render it opaque.

As purulent ophthalmia is an exceedingly dangerous disease if neglected, or improperly treated, great care was observed in this class of cases. The main object of treatment of course is to check the inflammation, and, if possible, its extension to the tunics of the globe. The hygienic measures previously mentioned were rigidly enforced, and if possible the patient was kept in bed for a day or two in a darkened room. Pure air, freedom from excitement, and absence from irritating light, are all desirable. The eyes were washed with tepid milk and water every half hour, and the edges of the lids smeared with an ungnent. Blood was occasionally taken from the lids if there was much engorgement. A brisk purge was given. The diet was light, and freedom from alcoholic stimulus enjoined. Cold applications to the lids were sometimes very grateful. The eye is best bathed with a small glass syringe, with a smooth nozzle, the tips of which can be inserted in the outer canthus, between the lids, and a gentle pressure on the piston sends a stream of the warm fluid over the entire surface of the eyeball. Quinine in small doses at frequent intervals, was always used, and chloral hydrate at night to procure sleep. So long as the cornea and iris were not involved, the silver solution previously mentioned, was used, and its effects carefully

watched. Atropine was instilled when the cornea showed signs of irritability, and the astringent was immediately discontinued. Such epidemics are not infrequent in cities, and seem to have a predilection for crowded tenements and public charitable institutions. There is an intimate connection between them and epidemics of influenza and acute catarrhal affections of the throat and nasal passages. The latter part of winter and the early spring is the favorite season for such an epidemic, and there seems to be an intimate connection between it and the open wet winter just past. A large number of cases were so slight in degree of inflammation that the subject did not appear to a physician for treatment, and the great majority of those that came under my observation, were in an advanced condition, so that the disease did not so readily yield to treatment as if seen at an earlier day.

DIPHTHERIA.

By C. W. Chamberlain, M. D., Hartford.

Were it not for its influence upon the treatment of diphtheria, the question of local or systemic origin would be of little interest. If, however, the diphtheritic virus, whatever may be its nature, enters the system through a local lesion, and can be neutralized by topical measures before systemic infection takes place: and if auto-infection, by absorption of septic material from the local processes, occurs during the progress of the disease, which can be modified, or prevented by similar disinfective treatment, the question becomes one of great practical interest.

Diphtheria is a local disease in its commencement, the virus entering the system, in the great majority of cases, through the pharyngeal mucous membrane, where it effects lodgment, and initiates a series of necrobiotic changes, a catarrhal inflammation, fibrinous inflammation, with the characteristic membranous exudate, or gangrenous changes, with extensive loss of substance in proportion to the intensity of the virus, and systemic infection through the capillaries and lymphatics. In an analogous manner the virus of syphilis enters the system through a small local lesion, the systemic effects occurring secondarily.

While the diphtheritic membrane is of clinical importance as an index of the progressive nature of the disease, it is only an incidental product, while the infectious and necrobiotic processes take place beneath. It has been shown by Trendelenberg, Reitz, and others that precisely similar exudations can be produced by common irritants; and later, Griffini, of Turin, has confirmed their similarity by a careful microscopical study. Such are the diphtheritic patches in internal organs in pyaemia, puerperal fever, and other markedly systemic diseases.

The disappearance of the membrane simply indicates the arrest of the

progress of the disease, and that no further infection will occur through the local processes which henceforth are reparative, and there remains the systemic effects of the infection that has already taken place.

That diphtheria is inoculable, is now so firmly established, that whatever force the fact may give to the theory of local origin must be granted. The existence of diphtheritic lesions, which are undeniably primarily local, and later followed by constitutional symptoms, strengthens the analogy. Such is the case in the epidemic form of diphtheritic conjunctivitis, a contagious primary disease of the conjunctiva, followed by constitutional symptoms, if not early treated. This form is described by Von Græfe and Hirschberg as occurring in Germany and Russia. The theory of local rather than constitutional origin has been maintained by many of the most thoughtful and scientific observers from the time of Bretonneau to the present; and while questions of this nature cannot be decided by authority merely, or by exceptional cases, still all improvement in our knowledge concerning the nature and treatment of disease, comes through the labor of the careful and skillful observer, who uses all aids that science affords to further his clinical studies. As typical names of those of this class who have maintained the local origin of diphtheria, might be mentioned Waldenberg,* in Germany; Bouchut, in France; and George Johnson, in England, while it follows as a matter of course with the advocates of the bacterian theory. Many others, like Lewin* and Traube;* and Dr. Jacobi, of New York, teach that local origin is the rule in a great majority of cases, while another and perhaps larger class are unwilling to pronounce decisively for either view. The comparatively better results from local treatment, and the freedom from sequelæ in cases thoroughly and systematically so treated, form an argument of constantly increasing strength. The treatment might be summed up in one word, disinfective, and in outline consists in the thorough and systematic application, locally, to the pharynx (and larynx, if indicated,) of carbolic and sulphurous acids in solution with glycerine, preferably, and the internal use of the sulphurous acid, or the hyposulphites. To these may be added the tincture of iron, both locally and internally, although the first local applications are more serviceable without the iron. If membranes have already formed, lactic acid is the best agent to dissolve them, as the vapor of lime, if efficient, induces inflammation of the lungs, while the acid is not thus objectionable. A gargle of lime water, carbolized, should be used before either food or medicine are swallowed. In very young children the inhalation of bromine has often to be substituted, where more direct local treatment would be forced, while the carbolic and lactic acids can be used by atomization. While there is no specific claimed, the treatment outlined above will, in the majority of cases, yield the best results, and less often disappoint the physician.

* Berliner Med. Gesellschaft, April, 1872.

A CASE OF TYPHOID FEVER FOLLOWED BY PURULENT DEGENERATION OF MUSCLES.

By E. P. Swasey, M. D., of New Britain.

On the 16th of December, 1875, was called to A. S., a German, aged 19 years, and tailor by occupation.

Found him in a small room on the second floor of a house situated in the rear of a block of buildings. This room, with a stove at the foot of the bed, a chair and an old chest were his only accommodations. He stated that he had had a chill three days before, when he had given up work and gone to bed; not having felt well, however, for several days before the chill. Found him with a high fever, temperature 104° and pulse 100 and full. Face flushed, severe headache but no delirium; tongue coated, bowels constipated and tenderness in right iliac fossa. Ordered an aperient and half a drachm of bromide of potash, to be repeated if necessary. Bowels moved during the night, had some sleep and felt more comfortable the next morning. Nothing worthy of note occurred until the fifth day of my attendance, in the afternoon of which he had a severe hemorrhage from the nose. It had ceased when I reached him, but I found him very weak and pale, the pulse increased to 120 and scarcely perceptible at the wrist. The temperature in the axilla showed a decrease of over two degrees from what it had been that morning, and it was but seldom that it reached 104° during the remainder of the disease. Twenty-seven grains of quinine were administered that night, with still greater reduction of temperature. After the hemorrhage, about two days, a diarrhoea began which was partly controlled by opium and astringents. The specific fever lasted nearly four weeks, followed, with an interruption of about two days of apyrexia, by a symptomatic fever caused by abscesses. He first began to complain of pain in the left shoulder, which for a time was quieted by laudanum fomentations. Then a swelling over the left malar bone was poulticed, opened and pus evacuated. The pain after it left the shoulder seemed to shift to the right elbow, which became very much swollen, the tumefaction extending up the front of the arm to the insertion of the deltoid. Not quite divining the nature of this trouble, numerous applications were made during a week without relief, when a slight redness at the flexure of the joint suggested pus; poultice applied and the abscess opened, the enlargement about the elbow disappearing but remaining above. The next day this was opened, the matter having collected in the sheath of the biceps, and pretty rigid contraction of that muscle remained for some days afterwards, being gradually overcome by forcible extension. Following the abscess in the arm, rapid and great swelling in the sheaths of the gastocnemii made its appearance, also in the sole of the left foot. In the right gastrocnemius and the left foot there seemed to be one sac each and one opening each sufficed, but in the left leg

there were three distinct abscesses beneath the deep fascia. These were not healed when another made its appearance in the posterior of right thigh. Subjected to same treatment. He now began to complain of the left shoulder again, and a more careful examination showed an indurated condition of the axillary glands. Poulticed and opened. The last, and by far the largest, showed itself over the left hip-joint, and after the same routine, was opened, and, considering the extreme emaciation of the patient, an enormous quantity of pus discharged. From this time onward his improvement continued without interruption and his recovery was complete, his illness having extended over a period of thirteen weeks. Throughout, the treatment was tonic and stimulant, especially the latter. In assigning a cause for these purulent deposits, I have considered that the excessive loss of blood in the first week of the disease, the high temperature and the pressure of a hard bed, were sufficient without seeking other agencies.

The case has been written from memory, but it was of sufficient interest to enable me to recall to mind the more important points.

DIPHTHERIA.

By Rufus Griswold, M. D., of Rocky Hill.

The remarks in this paper are mainly confined to answers to the questions of the committee, and are the results of personal observation simply.

I have not seen any cases that I mistook for membranous croup, and in many cases where the exudative process had extended into the larynx and trachea I do not remember any in which the upper air passages had not been first affected; nor do I recall any, where exudation had taken place, in which there was not an odor characteristic of diphtheria, altogether wanting in pure membranous croup. Indeed, in cases involved in doubt, the fetid odor, more or less distinct, may be regarded as one of the chief aids to diagnosis. Croup is also lacking the constitutional symptoms that belong to membranous diphtheria and is not followed by similar after results.

Diphtheria is as much a disease of the general system, the result of blood poisoning, as scarlet fever or small pox; in the latter the especial place of localization is usually the outer covering, in the former the mucous membranes. I am certain that I have seen cases where the diphtheritic disease was dominant where all the other symptoms were marked, but there was no development of exudation.

Such cases have their counterpart in an epidemic of measles. It is not an infrequent occurrence in rubeola to see a case, among three or four cases in a family, in which, while all the other symptoms are severe, there will be no perceptible eruption; meanwhile, the other cases, dating from

the same point of exposure, developing the premonitory symptoms at the same period and proceeding in other respects like the non-eruptive case, will have a free skin development. This non-eruptive case is none the less a "general" or "blood-poisoned" disease; nor, in many cases, is the system any the less under the influence of the specific virus. In truth, these non-eruptive cases are among the most dangerous; the poison is laying its force upon the mucous membranes, or the nervous system, and instituting pulmonary or intestinal irritation, or convulsions. The deduction from this, in its analogous application to diphtheria, is, that we may have (as my observation has abundantly confirmed to me,) cases in which there is no membranous deposit at all. In respect to the deposit the case *aborts*. There is an attempt at exudation, but it is a failure. If you inspect the fauces in these cases you will find in some of them an appearance unlike that in any other kind of sore throat—a shining, glassy look; an indication of an attempt to lift the mucous lining from the tissues beneath, and in some instances a distinct line of demarcation between an arterial and a venous coloring in the membrane itself, sufficient to show an attempt at cropping out. Further, before any local manifestation can be discovered, there is frequently a depression of the system—a severe chill, followed by a high fever and extreme prostration. Now if the diphtheria is "at first a local disease," and the "general disease" is dependent upon the "progress" after the local trouble, we may ask—why this general disturbance before any local trouble is present? It may be said that the existence of diphtheria can be demonstrated only by the presence of the peculiar exudation; to which the reply is, that the cases of any febrile disease are not all typical in the respect of possessing *all* the symptoms that belong to the disorder. In an epidemic of measles we have cases with all the other symptoms pronounced, but the rash wanting; cases with the rash, but without fever and without the catarrhal trouble; cases with the fever and the rash but no catarrhal symptoms; and we have the full-blown disorder. You may call some of these *spurious* rubeolas, if you please; the reply is—they all owe their origin to the *same specific contagious influence*;—they are measles, but with variety in the development of symptons. Corresponding observations may be made upon the phenomena presented by diphtheria;—there will be variety in the symptoms manifested; the especial membranous deposit may be wanting to give the fully-fledged typical case, but other indications will assure you that the diphtheritic influence is there. Without doubt, in the progress of diphtheria, the re-absorption of the poisonous secretion intensifies the malignancy of the complaint, bringing the entire system more and more under the power of the disease.

I do not believe that diphtheria arises without the existence of a specific morbific cause. What that cause may be, I do not pretend to know any more than why intermittent fever has in the last few years invaded

my neighborhood, where it had never previously inhabited. Have temperature and moisture been any more variable or more productive of this peculiar disease in the last thirty years than they had been in the previous thirty years? Are local surroundings any more specifically potent for its development in one generation above those in another? I know of no reason why, for the first few years of my residence in a small country place, and for many years previous, the disease had not been known there, and that it should then arise without any change in the character or habits of the people, and without any alterations in the physical features of the locality; should prevail largely and malignantly for half a dozen years, and then gradually fade both in the number of cases and in the severity of its symptoms, till for the last four years we have had much less of it than before. At the same time, other localities, where there has been very little of it previously, have the past winter suffered severely. The history of other diseases instructs us that it is one of their features that they are absent for a series of years from given points; that they sink into insignificance and nearly vanish for a period; and then revive to spread over indefinite reaches of country. The reasons for this subsidence and return are yet, many of them, to be discovered. Diphtheria is subject, in its ebb and flow, to the same potent, but as yet, mysterious causes. There is an intangible influence underlying its appearance in different places at different times, to which variations of temperature and local surroundings are at most only auxiliaries to development.

So well convinced am I, from personal observation, that the disease is taken by one person from another, that I always endeavor to keep *children* away from much contact with a patient suffering from it. Given an entrance into a family of children and it often goes through all, but not with the degree of certainty of measles and scarlet fever. I have seen single cases in large families, where the surroundings seemed favorable to its spread, and families of from three to six, where all have had the disease in the course of three or four weeks.

The average duration in fatal cases depends greatly upon how the patients die, if from strangulation from the presence of adherent membrane in the larynx and trachea preventing the entrance of air into the lungs, as some cases do; or if they die asphyxiated, from the secretion and accumulation of the ropy—though not necessarily adherent—diphtheritic exudation in the ramifications of the bronchial tubes, preventing the oxygenation of the blood,—as other cases do,—the duration may be twenty-four hours, or a week, and will average four to six days. If they die from the prostrating effects of the poisonous influence upon the general system, as in some cases; or if essentially from starvation, in consequence of inability of deglutition, or because the stomach persistently ejects nearly all that enters it, as in still other cases,—you will have death on the average in about two weeks. If they die from uraemic poisoning, the

result of a suppression of the urinary secretion, as a secondary effect of the disease, as in some cases under my care, it will be in two or three weeks from the outset of the diphtheria.

I have not observed diphtheria to be "influenced by the nature of the soil,"—for it has been scattered over the locality in which I reside under all the varying physical features that the place affords. I have not noticed that it paid any attention to circumstances of "social relations," or of "habitations;" for it has invaded the families of the most cleanly of my neighbors, where there were no special surroundings to provoke its appearance, as frequently and as ferociously as the families of those whose habits were less commendable, and whose habitations were less cleanly and comfortable. I do not mean by this that filthy surroundings and unventilated rooms will not aggravate the unpleasant symptoms, and render recovery in a given case less likely; but that the disease does and may appear where all sanitary measures have been sharply enforced, and with the most extreme malignancy. I have not *observed* that changes in the "weather" have influenced diphtheria; but have not paid particular attention to that point. As to "seasons," the disease, in the years when it has prevailed in my neighborhood, usually made its appearance in September, continued into February and March, and then mostly subsided until the returning fall. No reasons are known for its doing so.

I have sometimes thought that good results were obtained from "topical applications;" but looking back over a considerable experience, and remembering that I have seen cases where topical applications, of various kinds, faithfully applied, gave very little satisfaction; while in other cases, from one or another reason, no local treatment had been used, and the patients recovered,—I have doubts of the utility of efforts in that direction.

We have to remember that neither the fauces nor the nares are the points of deathly deposit, except in the comparatively smaller number of cases where there is inability to swallow. However thick and tenacious the false membrane about the palate, tonsils, and fauces generally; however fetid and vile the secretion in and discharge from the nostrils may be,—if the larynx, trachea, and bronchial tubes remain unclogged, the patient escapes the chief cause of death in the vast majority of fatal cases, and will probably recover; and this main point of fatality, the windpipe, is beyond the reach of washes and gargles, unless you resort first to the operation of tracheotomy. If we consider the inhalation of vapors as topical applications, my experience suggests the vapor of *slacking* lime. This has sometimes appeared to afford *relief*; but I recollect no cases where I thought it had saved the life of the patient.

NEW HAVEN COUNTY.

To Chairman of Committee on Matters of Professional Interest, &c.

Of the eight counties which make up the State of Connecticut, New Haven County is the third in size, being about thirty miles in its greatest length and breadth, respectively. It lies between latitude 41° and 42°, while the 75th degree of longitude west from Greenwich crosses it near its middle. Its boundary lines are irregular, particularly that on the north which is notched in between Litchfield and Hartford County, reaching its more northern point at an apex in its middle, at the town of Wolcott. Its eastern boundary is indented about midway by Middlesex County, the upper half is a hilly range, while along the lower half runs the Hammonasset river. Long Island Sound lies along the whole southern face with its many indentations, the largest being New Haven Bay, which extends inward about three miles midway of the line. On the west the Housatonic river runs along the whole length, separating it from Fairfield County. The county as a whole may be divided, for convenience of description, into three divisions according to locality, viz.: The New Haven division, which comprises the whole southern face and extends north as far as Mt. Carmel, in its middle and eastern side, while on the west it reaches as high as Derby. The Meriden division, which comprises the eastern half of the northern portion, and joins the New Haven division at Mt. Carmel. The Waterbury division, which comprises that portion of the western half which lies above the New Haven division, and is made up largely of the valley of the Naugatuck river. Beginning with New Haven region, the surface is comparatively level with a gradual ascent from the sea line northward. The geological formation of this division, according to Prof. Dana,* speaking for the immediate vicinity of New Haven, as relates to the soil, is made up of alternate layers of clay, sand, and gravel, while the rock is for the most part trap, with some sandstone, quartz, and gneiss. On either side of the city there rises East and West Rock 340 and 400 feet in height, respectively, formed by the bending of the crust of the earth in the Paleozoic age, and consequent eruption of these vast masses of trap, through the earlier formed sandstone. At the same time the veins of copper and

* Paper on The New Haven Region, by Prof. Dana, Yale College.

barytes were formed in Cheshire, and in fact, all the mountainous ranges of the county.

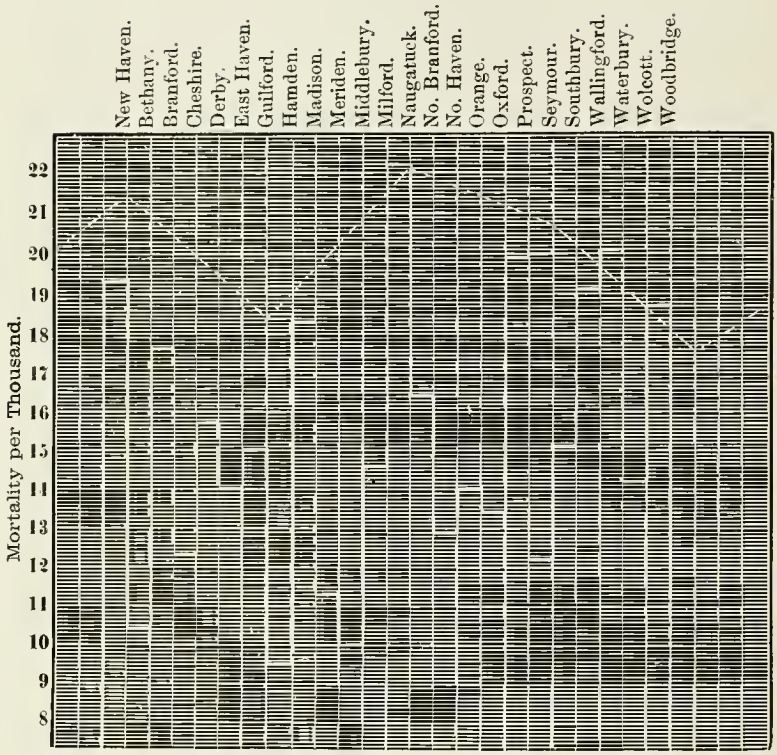
The conformation is largely due to glacial action, which leveled down the movable bowlders and debris, and pushed the Sound outward from the base of East Rock to nearly its present position, while the floods of water produced by its melting brought down material from above to make the northern slope of this region. The whole of this division was formed by the same general causes and partakes of the same geological features for the most part, but in the eastern portion the surface is more hilly and rough. In short, the whole county was subjected to a similar geological action, and is of the same general character.

Passing to the Meriden division, the city of Meriden lies at the head of the plane which slopes up from New Haven, here the surface is hilly and irregular. In this vicinity the Hanging Hills reach an altitude of 995 feet, being a continuation of the East Rock range. Meriden is situated upon low ground, surrounded by contiguous hills, and is conspicuous for the number and magnitude of its manufactories. Near Wallingford the surface is less hilly and is more a rolling, fertile tract of country. The mountainous range which begins at West Rock, passes up through this division in the vicinity of Cheshire, and leaves the county.

In the Waterbury division is found the same high altitude and rough surface, particularly in the locality of Wolcott, and Southbury, and adjoining towns which partake of the well-known characteristics of Litchfield, purity and clearness of atmosphere ; then as the Naugatuck river is approached, there opens up one of the most characteristic regions of the county ; commencing at the city of Waterbury, which slopes from the surrounding hills down to a common center, the course of the river is followed downward guarded on either side by high hilly ranges : this is the Naugatuck valley, and all along lie flourishing and busy towns. Here are found the high features of the hill combined with the conditions of the low lying valleys, and the local characteristics of the large towns. Running partially through the county are numerous small streams, but only four are worthy of the name of rivers, namely, the Naugatuck, which rises high up in Litchfield County, and empties into the Housatonic at Derby. The Quinnipiac, which courses through the whole county, and terminates at New Haven Bay, while the Hammonasset and Housatonic form boundary lines as before mentioned. The inhabitants of the county are largely

agricultural in their pursuits, but many are engaged in the various trades incident to its large manufactories in metal, and wood, rubber, woolen, and the like, and thus are subjected to the unhygienic influences of such occupations.

This, in brief, is a sketch of the topographical and local features of the county. Within its limits over 134,000 people are now living subjected to the influence of all these natural and artificial conditions, and the question which this report has to do with is this : How can the health of this varied mass of humanity be promoted and life be prolonged ? and what, indeed to-day, is the status of public health in this section of the state, and what are the chief causes which deteriorate the physical condition of the people ? The answer to this question must come from the individual medical man on the points most vital, for in the present state of registration only a limited amount of information can be obtained there. With this end in view, questions have been sent to every town as issued by the Committee on Matters of Professional Interest, and the replies received, and whatever information has been obtained from statistics and observation, are here appended. The report of the State Librarian for 1875 not being, as yet, issued, these deductions are necessarily based upon the report of 1874. In the year 1874 there were 2,379 deaths registered in this county. It has been estimated by various authorities that for every death two are sick; every death implies an average of 730 days of sickness. A person loses, on an average, 19 or 20 days by sickness, annually. In America there are 20 cases of sickness to 1 death. Statistics say that 11 per 1000 is the lowest general death-rate that has been obtained. Dr. Farr, Registrar General of England, estimates that 14 per 1000 is the lowest average rate reasonably to be expected there. According to the above, in 1874, there were 1,736,670 days of sickness, and 47,580 cases of sickness in this county, while the average death-rate, assuming the population to be 134,114, which is not far from being correct, was 17.6 per 1000. In '73, the death-rate was 20.7 per 1000 ; In '72, 22.1 ; in '71, 18. 3; in '70, 21.5; the population and number of deaths being estimated for each year. This is shown graphically by the accompanying chart, as is also the death-rate for the various towns in 1874. The chart in addition makes apparent the defective registration of some towns, as indicated by their low death-rate.



DESIGN

Showing the comparative mortality of New Haven County per 1,000 by Towns, as returned, for the year 1874. Also the mortality of the County as a whole for each year from 1870 to 1874, inclusive. The continuous line indicates the Towns for 1874. The broken line, the County as a whole for each year.

To what are these deaths due, and may the rate be reduced? The great disparity during the five years would indicate even at first thought, some special cause either present or absent, and manifestly it must be an external cause, for none referable to the body alone would be sufficient to account for it, even for the various towns as indicated in the chart, the cause, therefore, must be local or atmospheric, and in a certain degree preventable. As a matter of fact let us see in what particular class of disease the rate may be reduced. 1st, Zymotics. Of the 2,379 deaths in 1874, 454 were of this class. Of this number, 149 were due to cholera infantum, or 6.2 per cent. of the whole; 109 to typhoid fever, 4.5

per cent. 2d, Respirative. Of this class there were 575,330, or 13.8 per cent. were due to consumption, 165, or 6.9 per cent. to pneumonia. Consumption, then, is by far the most fatal disease of the county. Just how far this can be prevented remains to be seen, but when we take into account the great number of operatives who are subjected to the unhygienic influence of our factories, especially in the Naugatuck Valley where they are subjected to the dust of brass and other metals, to that of the woolen and rubber mills in which young girls of ten to twelve years of age habitually work, and particularly in the rubber factories where it is necessary to press the last on which the shoes are formed, against the chest, thus tending to contract it; and when we consider the ignorance of the mass of the laws of self-preservation, is it unreasonable to suppose that there is room for a large reduction here? And even in pneumonia, due largely to atmospheric influences, a reduction may without doubt be made by the observance of the laws of health, for there is a type of the disease now recognized to be due to infection from sewer gas, privies, drains, over crowding and the like. The remaining two diseases, typhoid fever and cholera infantum, can, without doubt, be in a very large degree prevented, so it may be assumed that sanitary means could have reduced these diseases as a whole at least one-half, although the general death rate was at the low rate of 17.7 per 1000, which would be a reduction of 2.80, and so make the general rate 14.80 per 1000, a little higher than Dr. Farr's possible estimate for England.

The extent to which these diseases can be prevented is further demonstrated by comparing the death rate of one or two cities with that of the surrounding towns away from the local influences of such places, but having nearly the same atmospheric influence. In 1874 the death rate of New Haven was 19.3; in East Haven 14 per 1000; in North Haven 12.9; in Hamden, 9.5, which great disparity is hardly explainable except in part by faulty registration. Again, take Waterbury, here the death rate was 20.1 per 1000, while in Wolcott it was 14.2, in Southbury 15.1. New Haven has an active Board of Health which will overcome in the future these causes of preventable disease; but what swells the mortality in Waterbury? An inspection of the registrar's report for 1875 reveals the fact that the death rate was 21 per 1000; of the 334 deaths, 47 were due to consumption, 17 to typhoid fever, 15 to cholera infantum, 14 to diphtheria, making 93 of the class of preventable diseases, 27.8 per cent. Now what is the cause of this. The soil on which Waterbury

was built was originally of a boggy, swampy, formation for a part of its extent, and the rest is of a sandy nature. Into this receptacle flows the refuse of the city only to contaminate the water and air, there being no provision made for its escape, and added to this the occupation of the inhabitants affords ample cause for the high rate of mortality. What a system of sewerage might do for Waterbury is brought forcibly to the mind, when we consider that it is estimated by Parkes that the excreta alone carried away by sewage amounts to 25 tons of faeces and 91,250 gallons of urine for every 1000 inhabitants per annum. Passing now to the class of nervous diseases it is well to note that the rate per cent. of the number of deaths from this class for 1874 is 16.34; of this number 3.39 are due to convulsions, which of course occur for the most part in young children, and reverts at once for a cause to bad management as regards rearing and feeding. Then comes apoplexy, 3.02 per cent., which is a disease of adult life, but largely due to method of life. Then there is the indefinite term "diseases of brain" 2.37, and is suggestive of intemperance, overwork, and the mental wear and tear of our American civilization. The rest is divided up in small portions among the well-known forms of nervous disease. Do not think me an enthusiast when I say that it is possible for hygiene to do much toward reducing the death rate of these classes of disease, and that too, without bringing life down to a routine of mechanical exercise, and making it miserable by entailing upon the individual the morbid idea that he is in constant danger of ruining himself by a violation of the laws of health; for when the people become educated then will they act not from fear or duty alone, but naturally and from an innate intelligent perception of the laws of health. Men and women will personally become familiar with the requisites of good health, which each one should apply to himself according to his own peculiar need, or if they have the care of children it will be directed to them. The method of reason will not be "so much meat is good for me because I am thin, or so many vegetables should be abstained from because I am fleshy." "I must wear flannel because it is the best to protect me from cold, I must not drink tea since it is bad for nervous people," but rather each one will be able to do what nature and the exigencies of life demand. To-day the newspapers and the gossips of society and the traditions which have been handed down to our time prescribe set rules for all. One has been cured of cancer by a certain herb, so that is the remedy for all sores and swellings of a

suspicious nature. Another has been cured of catarrh by a certain kind of snuff, so that will cure all cases of catarrh, and so on through the whole catalogue which the half-educated public in medicine adopts. Longfellow, in his poem "Morituri Salutamus," singing of prodigious labor done in old age, refers to Cato who learned Greek at eighty, of Sophocles who wrote the Edipis at four score; of Goethe and his Faust; of Chaucer and his Canterbury Tales, all products of old age, and tells what may be done even at the closing days of life. Something akin to this enlightened medical knowledge is to do for the people, perhaps not in poetry or art, but by vigorous, well guarded lives the future generations are to bear fruit in healthy, manly action, from youth down to life's end, and the time shall come when that principle shall be the rule, and it will not be said as now,

> "These are indeed exceptions; but they show
> How far the gulf stream of our youth may flow
> Into the Arctic regions of our lives,
> Where little else than life itself survives."

The questions for the year and a synopsis of answers and statement of cases are here appended in regular order.

1. What have been the prevailing diseases in your locality during the year ending in April, 1876? Of those diseases which have been prominent in New Haven; cholera infantum is to be mentioned as occurring considerably in the months of July and August, 1875. In the late fall, during November, typhoid fever manifested itself somewhat, together with chicken pox and scarlet fever; these latter and also measles have been frequently seen during all the winter. In the months of January and February, 1876, the most noticeable disease has been diphtheria; this continued to prevail with diminished frequency during March and April. Pneumonia has also prevailed as usual during the spring months. Comparative tables of the principal diseases of New Haven for the past year, with a synopsis of the meteorological conditions by months, is inserted and affords food for useful study. For these I am indebted to the courtesy of Sergeant Tighe, of the U. S. Signal Service, who furnished me the latter, and to Dr. Gallagher, registrar of this city, from whose report I compiled the mortality table.

TABLE

Showing Monthly Mean of Barometer, Thermometer, and Humidity, Monthly Velocity of Wind, and Amount of Rain-fall, with the prevailing Direction of Wind for each month, from April 1st, 1875, to April 1st, 1876, compiled from observations taken at the United States Signal Office, New Haven, Conn.

MONTHLY.	April, 1875.	May, 1875.	June, 1875.	July, 1875.	August, 1875.	Sept., 1875.	October. 1875.	Novemb., 1875.	December, 1875.	January, 1876.	February, 1876	March. 1876.
Mean Barometer.....	29.957	29.979	30.034	29.979	30.055	30.021	29.979	30.065	30.007	30.108	30.092	30.003
Mean Thermometer .	43.0	58.2	67.9	72.5	71.9	62.3	52.9	37.8	32.7	34.2	31.2	35.5
Mean Humidity.....	61.4	59.1	67.9	69.8	78.8	71.9	71.9	72.7	72.4	72.4	69 6	67.4
Highest Barometer...	30.482 1st	30.331 14th	30.257 9th	30.255 8th	30.362 24th	30 469 12th	30.544 3d	30.788 22d	30.751 20th	30.628 5th	30.993 5th	30.512 5th
Lowest Barometer ...	29.513 24th	29,483 2d	29.685 18th	29.646 18th	29.755 18th	29.579 17th	29.349 30th	29.412 10th	29.255 13th	29.427 10th	28.869 15th	29.217 21st
Highest Temperature.	63. 2d, 30th	83. 23d	89. 28th	85. 27th	84. 12, 15th	86. 4th	72. 25th	66. 13th	62. 23d	63. 2d	58. 13th	57. 7th
Lowest Temperature.	21. 19th	38. 3d, 4th	43. 14th	54. 19th	54. 26, 27th	39. 22, 23, 24th	32. 13th	2. 30th	2.;20th	9. 13, 14th	3. 24th	6. 19th
Monthly Range of Temperature.....	42.	45.	46.	31.0	30.	47.	40.0	64.	64.	54.	55.	51.
Greatest Daily R'ge of Temperature..	24. 23d	26. 10th	27. 21st	21. 4, 13, 17. 20th	26. 29th	29. 9th	31. 8th	43 29th	36. 20th	33. 10th	37. 6th	31. 18th
Mean of Maximum Temperature.....	50.4	66.4	75.1	79.	78.0	69.9	62.	47.4	41.8	44.7	41.3	43.5
Mean of Minimum Temperature.....	33.8	48.3	57.4	63.	63.0	51.9	43.	29.3	24.3	25.3	22.7	26.2
Mean Daily Range of Temperature..	16 6	18.1	17.7	16.0	15.	18.0	18.6	18.1	17.5	19.4	18.6	17.3
Total Rain-fall.....	3.28 inch.	2.71 inch.	3.50 inch.	4.42 inch.	5.56 inch.	2.10 inch.	3.18 inch.	7.44 inch.	1.39 inch.	1.54 inch.	4.29 inch.	10.15 inch.
Prevailing Direction.	North.	South.	South.	South.	South.	N. W.	S. W.	N. E.	N. E.	S. W.	N. W.	N, W.
Total No. of Miles Traveled..... .	6893	5804	4772	4244	4508	5194	6025	6660	5925	5920	6265	7072
Maxim. Velocity of Wind per hour ..	32. 5th	28. 2d, 7th	24. 7th	20. 12, 17, 19, 23d	20. 18, 19, 23d	24. 17, 18	28. 27, 30th	36. 11, 29th	28. 19th	34. 6, 11th	44. 16th	44 21st
No. of Cloudy Days other than those on which rain fell,	1	1	0.	5.	5.	2.	2.	3.	3.	1.	1.	0.
No. of days on which Rain or Snow fell.	17.	17.	15.	11.	12.	7.	16.	11.	19	17	16.	16.

TABLE

Showing the number of Deaths monthly from principal diseases, due in part to Meteorological influences, from April 1, 1875, to April 1, 1876, New Haven, Conn.

	April, 1875.	May, 1875.	June, 1875.	July, 1875.	August, 1875.	September, 1875.	October, 1875.	November, 1875.	December, 1875.	January, 1876.	February, 1876.	March, 1876.	Total.
Phthisis	25	10	13	12	13	14	19	10	14	11	13	16	170
Pneumonia	6	9	3	3	1	1	7	8	11	13	7	15	84
Bronchitis	..	..	..	..	..	1	1	..	1	3	7	6	19
Rubeola	..	..	..	..	..	..	..	..	1	5	4	3	13
Scarlatina	6	8	1	3	3	1	7	4	5	10	6	5	59
Variola	1	..	..	..	..	..	..	..	..	1	1	..	3
Diphtheria	1	1	..	..	..	..	3	1	3	12	12	5	38
Croup	3	2	2	.	2	1	5	5	4	1	5	6	36
Pertussis	..	1	.	.	..	2	2	1	..	..	..	..	6
Erysipelas	2	1	..	..	..	..	..	1	..	3	2	:	10
Typhoid Fever	7	2	1	..	2	7	2	5	3	2	..	3	34
Intermittent Fever	..	..	..	2	..	2	2	1	1	1	..	1	10
Pyæmia	..	..	..	..	1	..	..	..	1	..	..	1	3
Diarrhœa	..	..	..	1	1	..	..	..	..	..	..	..	2
Dysentery	..	..	..	2	2	..	..	..	..	..	..	2	6
Cholera Morbus	..	1	..	1	5	..	.	..	..	..	..	..	7
Cholera Infantum	..	1	6	50	34	11	1	..	..	..	1	..	104
Cerebro-Spinal Mening.	..	..	1	..	2	..	1	1	1	1	1	3	11
Tetanus	4	1	1	..	4	1	..	..	..	1	..	..	12
Rheumatism	..	..	..	1	1	1	..	..	..	..	..	..	3
Puerperal Fever and Metro Peritonitis	2	1	..	.	1	..	1	..	..	1	3	2	11

From Cheshire, Dr. Chamberlin writes that "the diseases of the year have been those usually met with in country practice, of the stomach and bowels in summer, and of the air passages in winter. There was less severe sickness last winter than that before: less fever and ague this year, but many cases of irregular malarial complications." Dr. Nickerson says for Meriden, "Typho malarial fever, diphtheria, and pneumonia." From Madison, Dr. Webb mentions the frequency of measles of a mild type, requiring little treatment; typhoid fever, dipthheria, and pneumonia have prevailed but little, of the other diseases about as usual." Dr. Barnett says for West Haven, "Intermittent fever has been most prevalent; there have been small epidemics of scarlatina and rubeola." Dr. Goodyear writing for North Haven and vicinity says: "the prevailing diseases as they have occurred in my practice, have for the greater part been of a decided malarial character, and diseases arising from the long continued effects and frequent relapses of malarial fever, such as debility, rheumatic affections, neuralgias, sciatica, cerebral and spinal, with swellings in various parts of the body, and abscesses. These diseases have furnished the greatest number of subjects for medical treatment. Other diseases have been far more fatal, but their number is smaller. The former class of patients have nearly, if not quite, all been treated successfully with quinine; they are not cured by it, but in all cases as far as my observation extends, where there has been malaria, the sufferings of the patient have been speedily and effectually relieved. The doses required have been from five to ten grains repeated frequently until from thirty to sixty grains have been taken, then either discontinuing or giving it in small doses. No other "substitute," of which thousands have been tried by the patients on their own responsibility, has proved to be anything like as successful either as a curative or prophylactic. Emetics in cases of a greatly disordered stomach have been serviceable in putting the stomach in a condition for other medicines, but require to be followed speedily by quinine. All debilitating causes, as overwork, undue excitement, and especially exposure to the night air, the early morning air, with much exercise in the morning before breakfast, as well as continued exposure to the hot sun, especially after a few showers preceded by a long drouth, have been specially marked as producing a decided increase in the number of cases, as well as an increase in the severity of symptoms. The disease is most prevalent in the early spring, and autumn months. In the former months it occurs

with catarrhal diseases of the throat and respiratory organs. In the autumn, August and September especially, it is most prominent, and is then often combined with diseases of the abdominal organs, gripings, fluxes with fevers, dysentery, &c.

Malaria as a specific disease is evidently with us still, but is somewhat on the decline, owing as I suppose in part to the masses having become acclimated, and thus being affected less than formerly, and also in part to the manifest change in the malarial element itself. New comers residing here for a short time, especially in the autumn, are pretty sure to have the disease in a well developed, intermittent form, but I think have it less severe than our old residents did on its first appearance in this locality.

Fatal Cases. The greatest proportion has been from pneumonia. About one-third of all the deaths in this town during the past year have been from pneumonia; it has been exceedingly unmanageable and extraordinarily severe and fatal.

The prevailing diseases during the latter part of the year and present date, have special reference to the respiratory organs, catarrhal disorders, otitis, some few cases of conjunctivitis and laryngitis. The great prevalence of "sore throat" has been marked, and the affection is mostly "down deep in the throat," *i. e.*, the larynx and trachea. Influenza has also been quite prevalent, the profuse discharge from the nasal cavity has resembled the epizootic disease in a limited number of cases.

2. Have any new or infrequent diseases occurred? None mentioned.

3. If "remarkable and instructive cases of disease" have occurred in your practice, will you please report them in writing to your county reporter? Dr. Goodyear continues by relating cases as follows: "Have had two fatal cases of diphtheria, which I suppose were diphtheritic laryngitis. One was an adult between fifty and sixty years of age, death in less than twenty-four hours from suffocation and inability to swallow, paralysis of the organs of deglutition, with a profuse accumulation of muco purulent matter, only a small portion of which could be raised. The exudation was well-marked high up in the throat and palate. The patient was seized violently in the night after a hard day's work in the salt marsh in haying time, with some kind of convulsion, but I was not called until next morning, consciousness was retained after "coming out of the fit" until he died. The other case, a child about four years of age, attack insidious, inability to swallow,

larynx slightly swollen, rales in the throat over the windpipe, an exudation perceptible in the throat, and not as much depression as is often seen in diphtheria, no convulsions, senses retained till death, died of suffocation. Have been somewhat in doubt whether the case was laryngeal diphtheria, or membranous croup, the cough as I heard it was not characteristic of true croup. In one case occurring (not the past year) the patient had been working very hard to prepare for a church festival in a damp underground room, spent the whole night of the festival in the room where a large number had been present till nearly midnight, without ventilation, was taken with diphtheritic disease of the throat, and the voice was lost for some time afterward.

In another fatal case (occurring the year previous to the last,) death occurred at the end of two weeks by asthenia, consciousness till the end. Think the patient was not sufficiently supported from the outset, also he had a fright by a lad falling down stairs near his bed, which produced great depression and sinking, also by being got out of bed when in a low state.

Dr. Barnett relates an obstinate case of trifacial neuralgia of twenty-five years standing: "It has shown a remarkable barometric character, being intensely aggravated by moist atmospheric changes. Arsenic, till the stomach was affected, has relieved it most. Dr. Webb speaks of a case of dysenteric diarrhœa treated by hypodermic injections successfully that would tolerate no other method of treatment. In this case he gave morphine in $\frac{1}{4}$ grain doses twice in twenty-four hours, which kept the patient in a state of perfect ease, with a stoppage of the discharges which before had been frequent. Dr. Webb thinks highly of hypodermic medication generally; also uses chloral hydrate, usually in combination with potash bromide, never gives more than twenty grains nor less than ten to adults, and he has never seen it produce any dangerous symptoms. Dr. Chamberlin refers to a peculiar case of obscure malarial trouble in which the symptoms were continued illness and restlessness every other night. Quinine was given with immediate cure. Also a case of fibro cellular tumor of the uterus; patient aged 59 years, sickness lasted several years, at first there was much uterine hemorrhage, none during the last few months. For twelve months the pressure of the tumor upon the intestines and liver produced obstinate constipation and "bilious symptoms;" flatus was a cause of much discomfort; an introduction of a rectal tube afforded much relief, the free administration of savin and ergot

seems to have prolonged life for many months by checking hemorrhage, and also by retarding the growth of the tumor. No attempt at removal of the tumor was deemed advisable, and death occurred by asthenia.

Dr. Talcott of Guilford, sends "A case of aphonia." J. F., an unmarried lady 72 years of age, of active habits, and previous to the past winter of uninterrupted good health, was taken February 10, 1876, with apoplectic symptoms and total loss of consciousness. After three days, consciousness began gradually to return and was soon very perfect, but the right side was completely paralyzed. From the time of the attack to the present time, a period of eleven weeks, she has not been able to speak, even to utter a single syllable, as yes, or no, but can make discordant vocal sounds. She cannot spell out a word by pointing to a printed alphabet, yet she understands everything that is said or done, and makes known her wishes by signs, and is very demonstrative as to her views, making very positive gestures with her left hand, accompanied with expressive variations of the features of the face.

The case is somewhat singular from the concurrence of heightened mental activity, with total loss of control of the vocal organs.

4. Can you distinguish membranous croup from laryngeal diphtheria? 1, with few exceptions. 1, sometimes. 1, no. Dr. Barnett says, "I would look for the invasion of membranous croup to be milder and more subtle, for the disease to pronounce itself abruptly out of proportion to the prodromic symptoms. In laryngeal diphtheria, general and characteristic local symptoms may precede an invasion of the larynx. The active symptoms and effects are however the same in both." Dr. Nickerson says: "Not when fully developed, only by its previous history and that of the prevailing epidemic."

5. In your opinion, is diphtheria at first a local disease, which may at an indefinite time in its progress become general? 2 say yes; 4 no.

6. Or is it at first a general disease, or blood poisoning, of which the affections of the mucus membranes are merely secondary localizations? 1 no; 2 yes.

Dr. Goodyear regards it as a general disease of blood poisoning, the affection of the throat being merely a local manifestation. Dr. Chamberlin thinks it a general disease. Dr. Nickerson says: "in very violent cases the general symptoms may be manifested before those in the throat are perceptible, but not generally."

7. Do you think diphtheria can occur spontaneously, or in consequence only of such external influences as variable temperature and moisture? 3 no; 1 yes. Dr. Webb says it most commonly arises from variable temperature and moisture.

8. Or is a specific contagium vivum essential to its production? 1 yes; 2 no. Dr Barnett thinks that epidemics are caused in that way, the disease being imported. Dr. Goodyear regards it as due to a specific virus.

9. Is diphtheria a contagious disease?

Dr. Chapman says, slightly so; 1 always so; 1 yes; 2 somewhat so. Dr. Nickerson, always so, was in Meriden.

10. Have you observed the prevalence of diphtheria to be influenced by the nature of the soil? 2 no, 1 yes, 1 not positive.

11. By the weather or the seasons? 2 yes, 1 no. Dr. Chamberlin thinks it occurs in damp localities.

12. By social relations? 3 yes, 1 no.

13. By habitations? 3 yes; 3 think that crowded and ill ventilated houses influence the prevalence of the disease by depressing the vital powers and rendering the system more susceptible to the poison.

14. What is the average duration of the disease in your fatal cases? 1 no fatal cases, 1 seven days, 1 six to twelve days, 1 four to five days. Dr. Nickerson says, no average can be given that will be at all satisfactory. The fatality was from croup mainly, occurring at variable times during the course of the disease.

15. Have you observed good results from topical applications? 5 yes, 1 yes when the child will permit, but think it is not best to make continued attempts.

16. If so, what applications and how made?

Dr. Chapman relies upon a saturated solution of silver nitrate. Dr. Barnett prefers tr. ferri chlorid, ferri sulph., potash chlorate. Dr. Nickerson tr. ferri chlo. Dr. Webb uses tannin by insufflation, and a gargle of potash chlorate. Dr. Chamberlin, vapor of hot water, vapor of water and stone lime, astringent gargles, potash chlorate in solution.

17. In what treatment have you most confidence?

1, tonics and silver nitrate; 2, general and local combined. Dr. Goodyear has the most faith in nourishment, fresh air, and stimulants, absolute rest, quinine, potash chlorate, with local sweats, but not blisters or cathartics. Dr. Webb applies salt water externally, or a piece of salt pork, internally gives tr. ferri chlo ℥i, quinine

sulph 3i., dose, 6 to 20 drops, according to age. In some cases adds muriatic acid, also gives potash chlorate, gives nourishing diet, beef tea, also whiskey in the form of sling or milk punch, and has been very successful. Dr. Nickerson uses the method advised by Dr. Jacobi of New York, and Dr. J. Lewis Smith in the "American Journal of Obstetrics," and Dr. C. L. Billington, in "Medical Record."

This consists essentially in the frequent use of tinct. iron, chlorate potash, salicylic acid, carbolic acid, in the throat by injection into the posterior nares, all founded on the theory of the primarily local origin of the disease.

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

New Haven, July, 1876.

NOTES OF SOME CASES OF EAR DISEASE.

By S. H. Chapman, M. D., New Haven.

Case I. Occlusion of external auditory canal by annular growth of fibrous tissue, April 10th, 1875. Katie B., aged eight years. Three years ago, patient first noticed offensive discharge from the right ear, accompanied by earache. The discharge has continued, more or less, to this date. No treatment used except when pain was severe; then relief was obtained by warm water syringing. Constitutional appearance of child fair.

Examination. Watch L. 30 inches.
" R. 0 inches.

Inspection. Canal of right ear is occluded with purulent fluid. After syringing, ear-speculum is introduced, but meets an obstruction about half way down the canal. This obstruction has the appearance of a thickened membrana tympani, is slightly concave, covered with cuticle continuous with that of the external portion of the canal, and has a small apparent perforation in its lower and posterior third.

This orifice is oval, one by one-half lines in size, its loug axis inclining about 23 degrees from and to the right of the perpendicular.

The length of the auditory canal on the left or uormal side is found to be $\frac{18}{16}$ inch; the length of the canal to the growth on right side $\frac{9}{16}$ inch. The growth therefore divides the canal on right side into two equal portions. Exploration with probe shows first, that $\frac{18}{16}$ inch from the brim of the canal, on right side, exists the true membrana tympani; second, that the meubrana tympani, as well as the portion of the canal behind the growth, is inflamed; third, that the orificial edge of growth is about one-quarter of a line in thickness and resilient; fourth, that the

growth spreads out from this edge, is very dense in structure, and attached at its periphery by a broad and firm annular base. Inflation by eustachian catheter proves that the membrana tympani is imperforate, but discloses an otitis media chronica of some severity. An attempt is made to dilate the orifice of the growth, in order to obtain a view of the membrana tympani, but is unsuccessful on account of the density of the tissue.

Treatment. Ear to be syringed twice daily, and solution of zinc sulphate gr. ii ad aq. ℥ i, to be pressed into the canal beyond the obstruction. April 12th.—Discharge about the same. After cleansing, watch heard on contact.

With a fine curved bistoury, whose point is passed beyond the growth through the orifice, several long and deep radial incisions are made through the growth to its base. The tissue is found to be very hard, so that some force is required to make the incisions; pain not excessive, bleeding slight. After syringing, thoroughly paint the entire canal with tinct. iodine, and drop in Magendie's sol. of morphia. Order previous treatment.

April 15th. Patient complained of some pain for twenty-four hours, very slight discharge, appearance of fibrous growth. General contraction has taken place in the different sections; the orifice is considerably larger, allowing of a glimpse of the membrana tympani, but not sufficient in size to make out its condition. After syringing, watch $\frac{2}{36}$. Paint with iodine. Inflate middle ear by catheter. Other treatment as before.

April 17th. Some discharge. After syringing, W. $\frac{3}{36}$. Contraction still progressing in the growth. The smallest sized speculum can now be introduced, bringing into view $\frac{3}{4}$ of the membrana tympani. It is found to be in a condition of chronic inflammation, with thickening of the central epithelial portion. Handle of malleus indrawn and somewhat obscured. One, the lower portion of the growth, does not keep pace with the others in contracting, and to facilitate the process I cut from it a v-shaped segment. Treatment as before.

April 21st. Considerable discharge. Pulsation in the fluid beyond the growth. W. $\frac{1}{36}$. Syringing brings away a mass of old epidermis and some purulent fluid. W. $\frac{2}{36}$. Draining the canal with blotting paper, and, after Politzer's operation, W. $\frac{6}{36}$. Paint the growth and inner portion of canal with sol. nitrat. argenti. gr. 30 ad ℥ i. Use Magendie's sol. of morphia.

April 26th. Slight watery discharge. After syringing and draining the canal, W. $\frac{7}{36}$. No pulsation of membrana tympani; the membrane of a more natural color and position. Orifice of growth still larger. Treatment as before.

May 6th. Opening large enough for introduction of second sized speculum. Surface of ext. canal healthy throughout its entire length, except small space encircling the membrane. Membrane looks healthy

with exception of peripheral congestion and some thickening of its center. Zinc drops and Politzer's method of inflation.

May 12th. Opening somewhat larger, so that third sized speculum can be used, and the second sized speculum passed some distance through the opening. Canal and membrane apparently healthy. In the center of the latter some thickening of the epithelial layer still remains. W. $\frac{30}{30}$. Patient hears a whisper at twenty feet distance, with the right ear.

Case II. Thickening of membrana tympani, and sclerosis of Eustachian tube of left ear. Perforation of right membrana tympani with otitis media chronica. Treatment of left membrana tympani by blistering.

In May 1875, Mr. I, age 60, came to me to be treated for marked deafness. He had been under the care of aurists in New York and Philadelphia, without receiving benefit.

His general health had been fair; yet for some years he had suffered from an eczematous eruption in and about the external auditory canals.

Deafness was first noticed about twenty-five years previously, and has been increasing constantly, but slowly, to the present time; has had furuncles in external canals, and for some years a constant ringing in the ears.

Examination May 29.—Watch L. $\frac{0}{40}$. R. contact. P. is able to hear loudly spoken sentences in his direct and immediate presence.

Inspection. L. ext. auditory canal covered with an eczematous eruption in the form of dry epidermic masses combined with an infiltration of the cutis.

L. membrana tympani intact, slightly concave, of a whitish-gray color, and opaque.

Exhaustion of air and inflation by catheter produce no movement of membrane. A probe may be pressed firmly upon it without causing a sensation of pain, and indeed the pressure is hardly perceived.

The eczematous disease has apparently extended to the membrane, causing a marked thickening of its epithelial and sub-epithelial layers.

R. external auditory canal healthy, except in the vicinity of the membrane, about which and hiding which exists a whitish plastic tissue that syringing will not dislodge. This is found, under the microscope, to be composed of aspergillus.

By removal of portions of this growth with the forceps, a perforation to the extent of the entire anterior half of the membrane is discovered. The mucous membrane of the tympanum looks red, swollen, and pulsates.

By Valsalva's method, the left tympanum remains uninflated, while through the right, the air passes with difficulty. With the catheter, air passes into the left tympanum in an interrupted stream and with a creaking dry sound. This is followed by no improvement in the hearing. The passage of air through the right, dislodges a considerable quantity

of mucus, when the hearing distance is immediately increased on this side to three inches.

Treatment. Warm injections of iodide of potassium, gr. x ad aq., ℥i into the left, of nitrate of silver, gr. v ad aq. ℥i through the right tympanum: the occasional passage of bougies into the left eustachian tube; the use of dilute alcohol to the right, of oil and astringent lotions to the left external auditory canal, and the internal administration of arsenious acid, one-twentieth of a grain three times a day.

After the persevering use of this treatment for two weeks, the following is the noted condition of the ears.

By Valsalva's method, air passes readily into both tympana, on the left with moist sounds, on the right with the discharge through the perforation of a watery fluid. The parasitic growth has disappeared from the right canal, the remnant of the right membrana tympani and the lining of the tympanum behind it, look healthy.

The left extreme auditory canal is not yet well, and the left membrana tympani is in the same condition as at the first examination. As the eustachian tube and tympanum of the left ear seem to be in fair condition, it is thought probable that the total loss of hearing on this side, is due to loss of vibratory power in the membrana tympani, especially as the most careful examination betrays the existence of no neurosis. An attempt is therefore made to restore the vibratory power by diminishing the thickness of the drum.

For four days in succession, the left membrana tympani is thoroughly painted, six times at each sitting, with tincture of iodine. On the eighth day after the first application there appears to be loose tissue lying against the drum. Upon attempting to withdraw this with forceps, there is brought away what appears to be the entire drum, a circular concavo-convex opaque membrane. Upon examination, however, the true membrana tympani is found in place, intact, no longer opaque, but showing the handle of the malleus beyond it, and although considerably congested, yet of a fairly normal color.

Gentle inflation bulges the drum to so dangerous an extent, that the patient is ordered not to inflate for the following week, but to use a slightly astringent solution in the external canal.

At the end of this time, the drum has regained its firmness, though still yielding easily to the pressure of air behind it.

The hearing of the right ear has improved, the ringing in both ears has ceased.

After an absence from the city during the Summer, the patient again presents himself because of diminished hearing on both sides.

September 26. Watch L. $\frac{2}{40}$, W. R. $\frac{4}{40}$. Inspection. L. membrana tympani almost entirely re-covered by the grayish pellicle, has lost much of its vibratory power, is little sensitive to the touch.

L. ext. auditory canal partially occluded by epidermic masses, the cutis being in an inflamed condition.

R. ext. auditory canal healthy. Perforation of m. t. slightly diminished in size.

Mucous lining of tympanum inflamed. By Valsalva's method, both eustachian tubes are discovered to be open, but the air passes into the tympana with a bubbling sound. Injections of nitrate of silver, gr. ii, ad aq. ℥ i, are used daily for a few days with a gradual diminution of the mucous secretion on both sides, and a corresponding benefit to the hearing on the right side, but not on the left.

Desirous of producing a strong reaction in the left membrana tympani, and also in the cutis of the external canal, as former treatment directed to this surface had been only partially successful, I fill the left external canal with saturated solution of nitrate of silver, grs. 840, ad. aq. m. 720, allowing it to remain in contact for a few moments only.

This produces great pain for a few moments, but results in a uniform blister of the entire surface of canal and drum, which heals in about two weeks, leaving a healthy looking canal and membrane.

At the same time that the left ear is under treatment, the perforation of the right membrana tympani is touched with strong solution of silver, but with no increase in hearing distance. W. $\frac{1}{4}^{0}_{0}$ but with slight diminution in size of the perforation.

November 1. The patient is again under treatment for otitis media acuta, an accompaniment of a severe "cold in the head."

At this time, no recurrence of the former disease of the left canal and drum is apparent.

The hearing is temporarily diminished in both ears, but after a short treatment, returns to its former condition.

Remarks upon the Ear.

I. When the thickening of the membrana tympani is confined to its external layers, much benefit may be expected from its entire removal by blistering.

II. The greater efficiency of the silver-solution to the tincture of iodine. A pre-disposition to a recurrence of the disease seemed to be entirely removed by the former agent.

III. The harmlessness of the nitrate of silver, even in saturated solution.

IV. The fairly satisfactory result obtained by this course of treatment, in what appeared to be a hopeless case.

Case III. Otitis media acuta, complicated by acute nasal and pharyngeal catarrh, treatment by double eustachian catheter.

January 21, 1876. Miss U., aged 34, presents herself for treatment on account of the sudden onset of deafness.

History.—A week previous, patient first had the usual symptoms of a cold, combined with stiffness of the neck, difficulty in swallowing, considerable hoarseness, and a muco-purulent discharge from the nostrils.

Chlorate of potash was used as a gargle until yesterday, when suddenly she noticed that her hearing was greatly diminished in intensity. From the beginning of the attack, patient has suffered from noises and occasional twinges of pain in the ears, but her hearing having previously been acute, she did not suspect trouble from these symptoms.

Examination.—External canals and membranæ tympani healthy. Watch L. $\frac{0}{4\,0}$, R. $\frac{1}{4\,0}$. Pharyngeal and posterior-nasal mucous membrane bathed in muco-purulent exudation.

Sub-mucous tissues much infiltrated, especially about the orifices of eustachian tubes.

Tympana not inflatable either by Valsalva's or Politzer's method, but by the use of the catheter, air enters each tube and tympanum in a slow, interrupted stream and with a smothered moist sound.

Treatment. Use of warm nasal douche of bicarbonate of soda gr. x, ad aq. ℥i, three times a day, gargle of chlorate of potassa, quinia, gr. ii, three times a day.

January 23d. Infiltration has to some extent subsided. Valsalva's method fails to open the tubes, but by Politzer's method, air passes into the tympana with a similar result to that obtained by the use of the catheter at the previous sitting.

I now proceed to wash out the tympana and tubes with the double catheter.

Description of the instrument.—The double catheter, made at my suggestion by Ford of New York, has the shape of an ordinary eustachian catheter, with this exception, that the distal extremity terminates in two prongs, each the orifice of a separate canal.

The entire calibre of the instrument is of the size of No. 12, French scale, while its canal is divided by a partition into two separate channels in the proportion as to size of eight to one.

The smaller of these canals is for the conduct of fluid into the eustachian tube, and the larger, for its escape.

The object of this disproportion in size of the channels is two-fold, viz: that fluid may more readily escape than enter the tubes, and that particles of mucus may not clog the instrument.

To the distal prongs of the instrument are attached light tubes of rubber, about 18 inches long, the one attached to the conducting canal being connected at its farther extremity to a larger rubber bag armed with a stop-cock, the other being allowed to lead into a basin which is held in the patient's hands.

Method of using the instrument.—The rubber bag having been filled with the warm solution to be used, and connected by the tubing to the conducting canal, is gently pressed until the fluid is seen to escape from the extremity of the catheter. The stop-cock is then turned, the bag placed beneath the left arm, and, the patient being seated with basin in hand, the catheter is introduced in the ordinary way and held in place

by the left hand. With the right hand, which is now unoccupied, the tubing which forms the continuation of the exit-canal of the instrument, is directed into the basin, the stop-cock opened, and the left arm pressed gently upon the rubber bag.

If the catheter be in place, the patient will almost immediately feel the circulation of the fluid in the eustachian tube and middle ear, and after the lapse of a few moments, the fluid will begin to escape into the basin.

Cautions necessary to the use of the instrument.—

I. The catheter must be held firmly in place; otherwise fluid will escape into the mouth and cause the patient to cough, and thus interfere with the progress of the treatment.

II. It is not advisable to use the double catheter until the height of inflammatory action is passed; for the reason that the orifices of the eustachian tubes being somewhat firmly closed by the infiltration, some fluid may remain in the tympanum and be a source of further irritation.

III. The difficulty of making the instrument of a smaller size than No. 12, French scale, excludes its use in cases of extreme irritability or small size of the nasal cavities.

Some of the advantages of its use may be mentioned.

I. The readiness with which the middle ear can be cleansed of the exudation, in acute and chronic middle-ear catarrh.

II. In some cases, it removes the necessity for incision of the membrana tympani,—an operation which is dreaded by a nervous person.

III. At the same time, that exudation is removed, the eustachian tube is stretched and remains more open after the operation.

IV. In otitis media chronica, it has been successful in my hands in removing flaky mucus and the ringing noises in the ears.

V. The ease of applying heat, moisture, and medicament to the eustachian tube and tympanum, by this means.

Proceeding in the manner above mentioned, I inject about an ounce of warm sol. of soda, gr. x ad aq. ℥i, into each middle ear.

After the completion of the operation, the water in the basin is found to be permeated by shreds and small particles of mucus. By Politzer's method, inflation is now readily accomplished, the sound being clearer, and as of air passing though thin liquid.

Other treatment as before.

January 25th. The operation with double catheter is now repeated, a larger quantity of fluid being pressed into the left than into the right eustachian tube. The result is the same as at the previous sitting, with some benefit to the hearing.

Inject sol. argenti nitratis gr. ii, ad aq. ℥i, into each tympanum.

Quinia continued.

Gargle and douche discontinued.

Order patient to gently inflate thrice daily.

January 28th. Watch before inflation, L. $\frac{18}{40}$, R. $\frac{22}{40}$; after inflation by catheter, L. $\frac{29}{40}$, R. $\frac{26}{40}$.

Treatment.—Injection of silver solution, gr. ii, ad aq. $\overline{3}$ i into each tympanum. Painting the pharynx and posterior nasal region with silver solution, gr. 40 ad aq. $\overline{3}$ i.

Air enters readily both tympana, with a moist but unobstructed sound, so that I conclude not to use the double catheter again.

February 1st. Watch before inflation, L. $\frac{26}{40}$, R. $\frac{28}{40}$; after inflation by catheter, L. $\frac{28}{40}$, R. $\frac{30}{40}$.

Treatment as before.

February 6th. Watch before inflation, L. $\frac{30}{40}$, R. $\frac{30}{40}$; after inflation, L. $\frac{35}{40}$, R. $\frac{35}{40}$.

Same treatment.

February 12th. After gently inflating, patient hears the watch also on the left side, the normal distance.

The mucous membrane of the pharynx and region of the posterior nerves has regained its healthy appearance.

No treatment.

March 1st. Watch heard normal distance on both sides.

Remark.—It will be observed that the double catheter was used but twice during the course of treatment, yet this was sufficient to at once relieve the pain and excessive deafness. It is probable also that the speedy rise in hearing as well as the short duration of treatment—twenty-two days—were due to the same early removal of the exudation of the acute stage of the disease.

CASE OF CHRONIC DISEASE OF THE LARYNX.

January 17, 1876, I was called in consultation upon the case of Rev. Mr. P., of a neighboring city.

The history is subjoined. In March, 1875, a nervous strain extending over a period of two years culminated in great nervous prostration, the immediate cause being a severe attack of simple continued fever.

Of the air passages, the parts chiefly implicated, the larynx was most seriously affected. Disease of this organ still remained after recovery in other respects, and to such extent as to prevent the sufferer from resuming his professional duties. By the advice of the attending physician a journey to the South was made, during which this remnant of the fever almost entirely disappeared.

On the return journey, however, during the latter part of April, patient again contracted a "severe cold," the larynx becoming again much inflamed.

Professional duties were, however, resumed in May, and fulfilled to the

end of the month, when another and severer attack of laryngitis acuta, with aphonia, compelled entire rest and a trip to Europe. During this trip, which extended over a period of five months, the nervous depression and physical exhaustion, which were accompaniments of the throat trouble, disappeared; but the larynx did not recover its tone.

In place of the aphonia, which for some time deprived the patient of the pleasures of social intercourse, there was gradually substituted a voice of high falsetto pitch, and entirely unlike the normal full barytone of the years previous to the onset of the disease. Previous to and during this European journey the lungs were examined by different physicians for suspected incipient phthisis, but with conflicting diagnosis. The patient had suffered from an irritative cough, with the occasional expectoration of a blood-tinged mucus since the beginning of the laryngeal disease.

Patient is of a nervous temperament, and had a tendency to disease of the larynx, as is shown by the fact that some years previously he suffered from spasm of the epiglottis.

The conditions present upon laryngoscopical examination were the following: Chronic pharyngitis, with infiltration of submucous tissues; enlargement of follicles and tonsils; uvula not elongated; epiglottis thickened, and much congested, especially its laryngeal surface. Scattered over this surface, as well as the surface of the pharynx, could be seen small varicose veins; deep congestion of superior and internal surface of larynx, with ulcerations in the interarytenoid space.

The caliber of larynx seemed to be diminished by infiltration into the submucous tissue. The folds of mucous membrane which form the false vocal cords were so thickened that only the inner edges of the true vocal cords could be seen, and during a tone these cords were entirely concealed by the false cords, these latter forming the rima and vibrating by the action of the expressed air. With quick inspiration the rima was sufficiently wide to catch a glimpse of the mucous lining of the first few rings of the trachea, which was discovered to be also congested, small dilated veins being scattered here and there upon it. No abnormal action of the laryngeal muscles was apparent.

The diagnosis made upon the basis of the examination was chronic pharyngitis, laryngitis, with hypertrophy of false vocal cords, and trachitis.

In the inflammation we see the cause of the irritative cough, and in the varicose veins, which, on account of the delicacy of their structure, are easily ruptured, the cause of the occasional slight hemorrhage.

Treatment adopted was the following, viz: The direct application to the larynx and pharynx of solutions of nitrate of silver, in gradually increasing strengths from 40 to 560 grs. to the ounce of water, two days being allowed to intervene between the applications; the intermediate use of Morell-Mackenzie's inhaler, thrice daily, with the following medicaments:

℞:

Oil of origanum,	
Oil of cassia,	
Oil of Eng. juniper ea.,	ʒ i,
Oil of wood tar,	ʒ ii,
Light carb. magnesia,	ʒ v,
Aq. dest. ad,	ʒ iv.

M. One teaspoonful with inhaler.

In addition to this local treatment, a nervine and blood tonic was ordered. The use of the silver solutions was continued for about three weeks from January 19th, 1876, with an average of three applications weekly. After that time the interval was lengthened to four and then to seven days, and the use of the silver virtually ceased March 1st, as but two applications have been made since that time at intervals of three weeks. The other portion of the treatment was continued daily to March 1st, then occasionally to April 1st, and the patient has been recommended to continue the occasional use of the inhaler.

The result of treatment, a gradual disappearance of the induration and congestion, with marked contraction of the false vocal cords, and a simultaneous lowering of the vocal pitch. When this contraction had so far progressed that the true vocal cords could be thoroughly brought into view, I was surprised to find them little implicated, their anterior thirds alone being slightly congested. This enabled me to prognosticate an early recovery. In March the patient returned gradually to his professional duties, undertaking first the preliminary services, then the services of half a day, and finally, before the month came to a close, performing a full Sunday's labor, as he said, "with pleasure and without weariness."

The patient has presented himself but twice since March 1st, for inspection and advice. Upon the last occasion, April 10th, there still remained, of the former disease, a slight congestion over the arytenoid cartilages, a few hypertrophied follicles in the pharynx, and an occasional varicose vein.

NEW LONDON COUNTY.

To Chairman of Committee on Matters of, etc.:

I was appointed Reporter of the New London County Medical Association, and had promises of assistance from others. I have received the enclosed, which I forward, as requested. You may have received some papers which should be incorporated with these. My own report is crude and hastily written, but when one has nothing to say, it is wiser to keep still. I sent Dr. White an interesting specimen of a monster, which you have probably seen.

In the city of Norwich there has been the usual variety in diseases, and I know of no epidemic during the past year. Ailments with children have been more common than with adults, but were not usually of a severe character.

Dec. 26th, 1875, a severe case of confluent small-pox appeared, the patient having left Middletown, Conn., a few days before. The case terminated fatally within a week. Jan. 4th, 1876, a mild case of varioloid was reported about half a mile from this. Jan. 13th, there were five new cases of small-pox, three occurring in the family where the varioloid was reported; the other two within a few rods of the first case. In a short time several others appeared, some at great distances from the first, and with no known exposure to contagion; one of these at least three miles distant. The last case which came under the observation of the Health Committee was on the tenth of March. The whole number of cases was fifteen. Of these, there were six deaths; three cases were confluent. Of the fatal cases, there was one adult male (first case), three children, and a mother and infant in whom the disease appeared two days after confinement. Of the children, one was under three years of age, the others in girlhood. One fatal case under my care died on the fourteenth day of the disease. A noticeable fact connected with these cases is their occurrence in localities widely separate, and with no known communication. As one of the Health Committee, I know that every precaution was taken to prevent the spread of contagion. All the families in the tenements where the disease appeared were kept shut up, fed and cared for at public expense. Most of the sick were strangers to each other, and unless they visited or communicated late at night, it is impossible to account for the spread of the disease. A very thorough vaccination was made at the expense of the town, all infected tenements were fumigated, whitewashed, and cleaned,

and all articles of bedding, wearing apparel, etc., were either buried with the dead or burned in the country after midnight. The protective power of vaccination was well illustrated in the cases under my care. Here were the parents and three children, on the same floor, having but three rooms and these opening into each other. Vaccination was succesful in each, and during more than two weeks constant exposure to this virulent poison, there was not the slightest appearance of any eruption or any sickness in any member of the family.

I know of no way to distinguish membranous croup from laryngeal diphtheria when the disease is fully developed; unless the history of the case aids us, and the patches on the tonsils are or have been apparent, we are uncertain in diagnosis. I regard diphtheria as from the first a blood poisoning, and the most successful treatment seems to me in accordance with that theory. It requires a specific poison for its production, is contagious, though it often happens that many exposed to the contagion escape the disease. Like scarlet fever, it may take one or every member of a family. I do not think it is influenced by its surroundings, except as other diseases are, by foul air and depressing agents generally; but these are not its cause. Neither does the disease confine itself to the poorer classes; high and low, rich and poor, each or all may be its subjects. It would be unfair to state for this year's report, the average duration of the fatal cases. I believe there has been but one fatal case here during the last twelve months, and the disease has been very rarely met. I do not recall a single case in my own practice which has been of a general character. As to treatment, I have placed confidence in topical applications, together with constitutional treatment. I have used a solution of nitrate of silver, ℈ij ad ℥j, applied by a sponge probang to the tonsils, and have thought it beneficial. But topical applications avail but little unless applied early while the patches are on the tonsils. Internally the free use of milk and beef tea, the tinct. ferri muriat., and if the system is much prostrated, stimulants also. The chlorate of potash in strong solution has also proved serviceable. The inhalation of steam medicated by the addition of carbolic acid, is of value, and I should use it in all cases. Diphtheritic croup, I believe, is invariably fatal; other forms of the disease can generally be arrested in their progress.

L. S. PADDOCK, *Reporter.*

A CASE OF MONSTROSITY.

L. S. Paddock, M. D., Norwich.

Mrs. L———, Irish, aged 28, was taken sick on the morning of March 30, abont 4 A. M. She had previously given birth to a still-born child, whose death was caused, as she was informed by her physician, by the too early rupture of the membranes. During this second pregnancy she had suffered greatly from pyrosis and vomiting, but had received professional advice at three different times only. At my first visit, at 6½ A. M., I found her in good condition, labor well advanced and progressing favorably: the second stage of labor being abont half completed. The waters had escaped, but the membranes still covered the presenting portion.

Through the membranes could be felt a corrugated surface, and an attached pedicle, suggesting a breech case. Having ruptnred and displaced this membrane, I made a very careful investigation. I recognized a corrugated scalp beneath which were the over-lapping cranial bones: an ear could be felt, but the scalp appendage was wholly inexplicable. Labor terminated at 8½ A. M., with the birth of a living child. There was evidence of active life during the labor: at birth there was an attempt to cry, but no audible sound; the child breathed feebly abont fifteen minutes, then gasped a few times and life was extinct. It was a female, and weighed seven pounds. To our view was now presented one of the most remarkable cases, and I believe without a parallel. A head normal in size, except a rather narrow, receding forehead, with a thickly corrugated scalp well covered with hair: and two large and prominent ears with rather more than usual anterior projection. The relative position of the head and neck were entirely normal. The cheeks were full and natural, the mouth small, but perfect both externally and internally, and situated an inch above the chin. Above the upper lip, for the space of one inch, the skin was perfectly flat and smooth, extending to the edge of the one great orbit, directly in the median line. Within this orbit was a single large eye-ball, surrounded by lids with rudimentary eye-lashes. The longitudinal and transverse diameters of the eye were alike, each being one inch: the oblique diameter three-quarters of an inch. These lids were attached at the superior and inferior angles, and at the right and left canthus, but elsewhere could be freely moved upon, or raised off the eye-ball. The eye-ball could readily be moved by pressure of the finger upon it. This eye-ball, single in its orbit, and with one and the same conjunctiva and sclerotica, presenting uniform convexity, was composed of two distinct eyes placed horizontally on the median line, each eye being perfect in two-thirds of its conformation, the remaining inferior and exterior third being lost in the sclerotica. The corneæ (the two thirds that were visible) of each eye appeared to be perfect, and the pupils normal: but the left was larger than the right and ovally dilated, the perpendicular diameter being the larger. Between the cornæ was a con-

necting band, apparently making a tubular connection with fluid contents.

One quarter of an inch above the eye, on the median line, was a growth extending upwards whose width at its attachment was three-eighths of an inch; its thickness a trifle less. This lay upon the receding forehead inclining a little to the right, its length three-quarters of an inch; its breadth at the superior extremity five-eighths of an inch. The growth was covered anteriorly with skin like the face, and seemed entirely of muscular structure. Upon raising this from the forehead, near its attachment was seen a little groove covered with mucous membrane leading to an opening through which a small probe could be passed to the skull. Within the groove was a very small crest, which must be regarded as a rudimentary vomer, and the whole attachment must pass as an unfinished nose.

The noticeable features of the superior portion of the head having been previously alluded to, we shall have a more clear conception of this strange formation, by the measurements here given. The circumference of the head, measured over the external meatus of each ear, and over the eye was eleven inches. From the meatus of each ear over the scalp, superiorly six and a half inches. The occipito-mental circumference twelve inches. Total length of the child was eighteen inches.

A CASE OF STRANGULATED IRREDUCIBLE FEMORAL HERNIA.

By Dr. George W. Harris, Old Lyme.

The patient, a middle aged Irish woman, had been aware of an unnatural swelling in her left groin, since childhood, but never experienced decided inconvenience until two or three days previous to September 24, 1875, when decided symptoms of intestinal obstruction occurred. On Friday, the 24th, these symptoms became much aggravated, and very obstinate vomiting supervened. I was sent for at noon, and finding the tumor about the size of a small hen's egg, concluded it was femoral hernia.

Taxis seemed successful. Nausea and pain were entirely relieved. I administered a quarter of a grain of morphia, advised complete rest in bed until the next morning. During the afternoon the woman nursing her was unexpectedly called away, and the patient moving about considerably, all the symptoms returned. At six P. M., I found the tumor rather larger than at noon, and all my efforts at reduction were unsuccessful. (Gave another quarter grain of morphia.)

At 9.30, etherized the patient, introduced a small aspirator needle, as recommended by Mr. De Morgan of London, and evacuated probably a couple of drachms of bloody serum. Taxis was still unsuccessful. I cut down upon the sac, and relieved the stricture, when I found the

whole sac adherent to the surrounding tissues. On opening the sac, found it equally adherent to the gut, concluded it better to break up the external adhesions as involving only one peritoneal surface. I did so without much trouble, and easily returned the mass.

Gave another quarter of a grain of morphia, and advised the dressing to be well saturated with carbolized lotion, and emphatically enjoined perfect quiet.

In handling the sac and gut my fingers were well anointed with carbolized oil.

Kept the patient until the following Tuesday upon a free allowance of milk and beef tea, and one eighth grain of morphia every four hours. The bowels moved on Wednesday, spontaneously, and on removing the plasters the wound was found entirely healed.

The next day, contrary to my wishes, I found the patient up, and the day following, no bad consequences ensuing, I dismissed the case.

She has enjoyed good health ever since.

The most instructive feature in this case is the mistake which I must have made in supposing the first effort at taxis successful. Owing to a complete or partial evacuation of the contents of the bowels, as I felt confident, the gut slipt from under my fingers. The coincident relief might also be explained by the relief from tension such an evacuation would insure.

FAIRFIELD COUNTY.

C. A. Lindsley, M. D., *Chairman, etc., New Haven, Conn.*

Dear Sir :—Having been appointed reporter on "matters of professional interest" for Fairfield County, I enclosed your circular of questions to a physician in each town in the county. The questions have elicited replies in but three instances. And here I wish to return my thanks to Dr. Todd of Ridgefield, to Dr. Bouton of Westport, and to Dr. Lauder of Bridgeport, for their kind responses. I submit the following for the year ending in April, 1876. The prevailing diseases of our locality during the past year appear to have been malarious affections, diphtheria, pneumouia, and influenza colds. We have been under malarious influences particularly for the past eight or nine years, and I can only say in regard to them during the last year, that there has not been so much fever and ague as formerly, and we think there has generally been a decrease in the various manifestations of this kind of disease. The greatest number of cases of diphtheria seem to have occurred from November 1, 1875, to February 15, 1876, but about this disease I shall write more particularly further on. Some of the cases of influenza colds have been severe, but not of a dangerous character. They were iu greatest uumber from January 15th, 1876, to April 15th. We have not had so many cases of pneumonia as during the winter of 1875, when I saw a greater number of cases than during any winter for the past nine years, which limits my time of practice here. Those sick with pneumonia this year have seemed to require a supporting and stimulating treatment from the commencement, and those which I have seen have appeared of a changed type from the cases of 1875. In more sthenic cases, formerly I used depressing remedies primarily, giving quiuine in greater or lesser doses accordiug to the case, when the second stage developed, but this year quinine ofteu in large doses from the start, with less reducing remedies at any time, has appeared to be the better plan. I have heard quinine, Norwood's Tr. veratrum viride, and other remedies, with different kinds of management, called specific in pneumonia, but it seems to me that cases of this disease, as of many other affections, are best treated by knowing the sick person, realizing the prevailing type of the disease, and the character impressed upon it by locality. While in New York, last February, I uoticed the formula for "Warburg's Tincture,"

in "New Remedies" for January 15th, 1876, where it was credited with remarkable properties for arresting an attack of remittent fever, and called more nearly a perfect antidote to the miasmatic poison than anything yet discovered. The formula appeared to contain almost everything, one ingredient alone being composed of forty-eight different articles, some of which are very difficult to procure. Whenever I have had occasion to consult an expert in preparing formulæ, I have generally gone to F. A. Reichardt, 404, 4th Ave., New York City, who has always taken particular pains for me. Mr. Reichardt made some of the above tincture for me, and I have used it a few times, but have not yet had a sufficient number of cases of malarial fever to speak confidently in regard to the remedy.

I have found a solution of the permanganate of zinc in the proportion of gr. i–gr. ii to the ounce of distilled water, very useful as an injection in old and obstinate gonorrhœa, and in gleet, and have used it to keep in check the profuse gleety discharges which at times are met with while treating urethral strictures by gradual dilatation. I would say here that I have treated a large number of cases of stricture of the urethra by gradual dilatation, and have often found it tedious to the patient and to myself, but I believe that many cases are divulsed, and cut in order to save time. and because the enthusiasm of the day seems to demands such treatment. I quote in support of what I have said, the following from a recent authority for whom most of our profession have the highest respect: "I am a firm believer in what I fear is becoming an old-fashioned doctrine among us, namely, that gradual dilatation is far the best treatment yet discovered for the great majority of urethal strictures."—On the causes of gleet, &c., by Henry B. Sands, M. D., New York. In the above formula it is necessary that distilled water be used, as any organic matter would be oxidized by the permanganate of zinc. My friend Dr. H. G. Piffard, No. 10 West 35th St., New York, last winter gave me some pencils of the nitrate of zinc, relating to the discovery of which, facts can be had by reading an article by Dr. Piffard on page 80 in "New Remedies" for Mar. 15th, 1876. I have used this new caustic in mucous patches, on ulcers, as a primary application in granular degeneration of the cervix uteri, and whenever I wished to produce a slough deeper than would be caused by nitrate of silver. In power it is between chloride of zinc and nitrate of silver, and can be controlled much better than the former. I will

report a case of rosacea which is now under my observation and nearly well, and its great improvement being largely due to the ability and co-operation of Dr. Piffard, who has treated it jointly with myself. I will here reproduce the notes from his case book, which he has favored me with: "Mrs. D., aged 30, consulted me Feb. 18th, 1876, being sent by Dr. W. A. Lockwood, of Norwalk, Conn. I found rosacea in the first stage, affecting the nose, cheeks, and around the mouth. She stated that her father was living and well, but that her mother was dead, and had been delicate, suffering from neuralgia, etc. Her brother and sister had suffered from rheumatism. Her own general health has been good except last fall, when she suffered from dyspepsia. Formerly her uterine functions were not regular, but have been of late. Present condition of general health good, except occasional dyspepsia. Her local trouble commenced six or seven years ago, by redness of the nose, etc., but was slight until last fall, when, coincident with her dyspepsia, it became worse. Was treated by a New York physician with arsenic and iron, and restricted diet, with zinc ointment locally, without cure. At present the eruption is not very severe, consisting in an erythema with some infiltration, and a slight amount of papulation on cheeks and around the mouth, and one or two enlarged veins on the alae of the nose. In other words, a rosacea passing from the first into the second stage. Treatment: ordered her to eat less meat and more vegetables, and to take three times a day a pill containing two grains benzoate of lithia and one grain of benzoate of iron. Externally to apply sapo viridis to the affected parts for four nights in succession, to remain on all night, washing it off in the morning with a cloth, and then to apply vaseline. Then to use vaseline night and morning for three days, then to resume the sapo viridis for four nights as before, and return three days later for inspection. March 10th.—Returned to-day, saying that the sapo viridis had produced a great deal of irritation. Found her face, however, very much better, being still red, but much smoother, and most of the infiltration gone, except upon the left ala nasi. Questioned her more closely, and ascertained that she had a miscarriage some years before, and suspecting uterine disease, made a vaginal (digital) examination, and found cervix uteri enlarged with part of its surface roughened as if from excoriation, and some tenderness of the parts. Ordered a lotion of sulphur, camphor, and alcohol, for face every night, and requested her to allow Dr. Lockwood to treat her for uterine trouble. Omit the

lithia and iron. March 29th.—Eruption paler, and skin smoother except on left ala of nose, which was still red and thickened. Ordered green soap to be continued to this part, and iron and lithia to be resumed. She said that Dr. L. had made local applications to uterus. April 11th.—Much improved. Treatment continued. April 30th.—As patient is dyspeptic, stopped iron and lithia, and instead prescribed Aitken's syrup phosphates iron, quinine, and strychnia.

The above case of rosacea was connected with uterine trouble, for which I have treated this patient as follows: On examination with a speculum I saw a coarse, granular ulcer of the cervix, with enlargement and tenderness. The granular degeneration was located on the right side of the os, and extended from it to near the outer cervical margin. I cauterized their surface with nitrate of zinc as a primary application, and on examination at the end of a week, found the granulations much reduced. Applied equal parts of persulphate of iron and glycerine every week, ordering a vaginal injection of warm water to cleanse from discharge, and soon added acetate of zinc. The ulcer is mostly healed, and the face looks quite natural. I saw the patient within a few days of this writing (May 6th), and she seemed jubilant over the result, as she had begun to despair of being cured, and expected permanent disfigurement. This disease (rosacea) has not been always well understood, and this case shows that it is always important to look for the cause, which is often internal. I have before me the proof-sheets of the chapter on rosacea which is to appear in Dr. Piffard's treatise upon diseases of the skin, and I would recommend those interested to read his book.

As you particularly propose questions in your circular regarding diphtheria, I will write something about this disease. I consider diphtheria a constitutional disease of a dynamic type, with a primary local manifestation, usually upon the mucous membrane common to the alimentary and respiratory tracts. In the above my judgment has nearly adopted the definition given by Dr. Cohen of Philadelphia. I am inclined to the belief that the poison of diphtheria, like the poison of vaccinia, glanders, and syphilis, affects the system suddenly, and that its absorption is always instantaneous. I do not now claim to prove, but merely suggest, that the "primary local manifestation" of diphtheria may, like the initial lesion of syphilis, be proof that the system is already affected. Cases of diphtheria are said to have died "when no local deposit

could he detected," but I have known initial lesions of syphilis to remain undiscovered, and so have other observers. The "local manifestation" in diphtheria is most frequent somewhere on the mucous membrane of the air passages, but can happen on any mucous membrane, or when the skin is broken, as I have personally witnessed. The deposits which have heen discovered at post mortems inside of the heart and on the spleen were probably not primary hut secondary in their nature. I am not able to throw any certain light upon the causes of diphtheria, and I cannot find any proved. Certain phenomena seem necessary for the production of diphtheria, however, and their explanation may possibly he given at some future day, when the effects of moisture, winds, chemical changes, electrical tension, atmospheric and meteorological influences, may be better comprehended and understood. The disease can occur at any season of the year, but seems to be more frequent in damp and cold weather. Imperfect hygiene and defective drainage undoubtedly favor the occurrence of this disease, and when these bad sanitary conditions ohtain, the cases multiply and increase more rapidly. Those less socially favored, and therefore under bad hygienic conditions, as well as those who are debilitated from any cause, are most apt to be attacked. Different individuals probahly have a difference in susceptibility to the poison of this as of other diseases. Those who are still in the period of adolescence are more inclined to contract the disease than those who have reached maturity. Diphtheria can he sporadic, endemic, or epidemic. It is now thought by many that diphtheria as well as scarlet fever can be developed spontaneously. The laws which govern epidemics of different diseases are as yet poorly understood, and we are still looking to the epidemiological societies and others for satisfactory explanations. The contagion of diphtheria is thought to be in the breath, sputa, and excretions. The disease cannot he carried by fomites, as scarlet fever can he. The most fatal forms are those in which the deposit is in the larynx, food passage, and stomach, and when sloughing occurs extensively. In one of my fatal cases during the last year the deposit was in the larynx, but I only saw the child twelve hours hefore death owing to a prejudice the father had against calling a physician. Another case which died, probably had the deposit in the stomach, and I know of still another case which died in the practice of one of my friends here which was of a similar nature. It is often impossible to allay the vomiting in these cases. Alhumen in the

urine is known to be very frequent, and is probably always present at some period in severe cases. Glandular swellings occur, but have caused no trouble with me. Convulsions, epistaxis, persistently high temperature, quick and feeble pulse, vomiting, and diarrhœa, with a large amount of albumen continuing in the urine, mark the cases which are to die. But cases get well which have some of the above symptoms, and some of my own cases have recovered after numerous convulsions, albuminaria, epistaxis, etc., Few of these symptoms, however, were associated together in the same patient. A fatal result can hardly be avoided when the deposit extends into the stomach. I always give a guarded prognosis in every case. "Heart clot" sometimes happens, and a case was related to me this winter in which death probably came in this way. I feel like relying on the differentiation between diphtheria and membranous croup as tabulated by Dr. P. Solis Cohen in the New York Medical Record for February 19th, 1876. I believe to some extent in prophylactic treatment, and when isolation cannot be secured from contagion, and when epidemic influence is severe, I would give tr. ferri chlorid, 15 drops, three times daily, in half tumbler of water, to adults, using as a gargle, an ounce of chlorate of potash to a quart of water, giving three or four grains of the above salt internally three times a day. I like to have my patient in a warm, moist air, ventilation, with perfect quiet. This latter condition has seemed essential to me after noticing the great restlessness and erethism of the nervous system which obtain in most cases of this disease. Internally I use tr. ferri chloridi, from five to twenty drops according to age, every half hour, hour, or two hours, very largely diluted with water, as I find a concentrated solution often creates gastric disturbance, quinine in full doses gradually decreasing and brandy, chlorate of potash in lozenges or in powder with sugar to children, in small doses very often, remembering that we must be careful not to give too much, as chlorate of potash in some doses is now known to congest and influence the kidneys. See New Remedies, page 86, March 15th, 1876. Milk punch, eggs and beef-juice, with ice cream, are used by me, and I give ice, although it has lately been condemned as not facilitating suppuration so as to allow the membranous deposit to come away readily, I use champagne (*very cold,*) and carb. of ammonia when indicated as transient stimulants. The contact of a gargle with the throat is so transient that I urge its frequent repetition and often have a quart used in one day. I think

this an *important* point. I would not give an emetic to a child unless the accumulations made it necessary, and then would give a heaping teaspoonful of powdered alum mixed with a teaspoonful of ipecac, and repeat in fifteen minutes if necessary. A physician of this state has told me that he treats his cases of diphtheria with biniodide of mercury with great success. I have never had experience with any form of mercury in diphtheria. I like the spray of lime water produced by an atomizer on the throat. I do not burn throats with caustics in this disease. If deposit was well defined might use a brush dipped in tr. ferri chlorid. sometimes. I would not make any application unless I could localize it with certainty, and I do not find it often possible to do so. Laryngeal cases I would treat internally as above, but would give the local treatment which for several years I have found to be the very best for membranous croup as well as for laryngeal diphtheria. These cases have to be diligently and faithfully worked with by the physician and attendants. I place them in a room filled with the vapor of steam and slack lime constantly night and day, so that its hot vapor is being constantly inhaled. This must not be stopped too soon. I find this treatment fully endorsed and well described by Dr. Cohen, of Philadelphia, in New York Medical Record for March 11th, 1876, page 169. I have seen it save many lives in membranous croup during the past nine years. I give full doses of bromide of sodium for a time in these cases to quiet nervous irritability and to modify laryngeal spasm. I use colorless tr. iodine on enlarged glands short of breaking the skin; the paralytic sequelæ I treat by air, food, electricity and elixir ferri, quin. et strychnia, which I give during convalescence to nearly all cases as a tonic, thinking it might have some prophylactic effect. It has been well said that "much of the success attributed to some of the remedies highly lauded in diphtheria, has been due to their employment in unrecognized cases of common membranous sore throat, by no means an infrequent affection in large cities at all seasons." It is important to see cases of diphtheria often and explain the situation to attendants, and so attempt to secure their intelligent co-operation.

Very respectfully,

WM. A. LOCKWOOD, *Reporter.*

LITCHFIELD COUNTY.

To Chairman of Committee on Matters, &c.:

In compliance with the request of the committee, I sent their annual circular to all of the medical gentlemen of our county society, and have received in reply, only one communication. Finding myself thus almost totally without material for my report, I obtained permission from our Medical Society at its semi-annual meeting, held at Litchfield, April 25th, 1876, to submit the questions in the circular, to each member present.

In this way, I have secured the data upon which to found a brief report. The meeting unfortunately was not fully attended, and therefore several towns have not been heard from. The towns represented, were Litchfield, Goshen, Winsted, Wolcottville, Norfolk, Cornwall, Morris, Plymouth, Terryville, and Thomaston.

There has been no severe epidemic in the county during the year. I will mention the diseases most common, in the order of their prevalence.

1. Diseases of the Air Passages.

Acute bronchitis, pneumonia, pharyngitis, croup, diphtheria, and influenza, have been notably prevalent during February, March, and April. These diseases have been for the most part sudden in attack, coming on without exposure to the weather, somewhat protracted in their course, and not very decidedly amenable to treatment. The fatality has not been unusual. A few fatal, sporadic cases of diphtheria have occurred at New Hartford, Torringford, Wolcottville, and Terryville, and mild cases of diphtheritic sore throat were common in every town heard from. In New Hartford, three deaths from diphtheria occurred among children in the same family, during one week. The most rigid scrutiny of the premises as well as of the circumstances connected with the history of the cases, revealed nothing which would account for either the origin of the disease, or its exceptional severity. The average duration of the first two fatal cases, which were treated by a homeopathic practitioner, without topical applications, was about thirty-six hours. The third case, treated by a regular physician with constitutional as well as topical remedies, lasted three days. Death occurred by asthenia and not by suffocation, in all the cases.

Two fatal cases occurring in a family at Terryville, clearly illustrate the contagious nature of diphtheria, and therefore merit a passing notice.

Mrs. ———, the wife of a laborer, visited some friends in New York City in October, 1875, taking with her a child of two years. The house in which she stopped in New York had been infested with a fatal form of diphtheria. Immediately after returning home, the child was taken with the disease and died in forty-eight hours. A sister of the child, nine years of age, was taken sick a day after the death of the first case, and after only seven hours sickness, died overwhelmed with the poison of the disease. Another child in the same family, who had been taken away to a neighbor's house, entirely escaped the contagion. The father and mother however, were slightly prostrated with sore throats.

No source of miasmatic poison could be found about the house or premises. No other cases had been known to occur in Terryville. The house in which the family lived, was very thoroughly renovated and disinfected by its owner, and diphtheria was not heard of again in that locality.

2. Scarlet Fever.

A mild epidemic of this disease prevailed in Litchfield last summer, in Wolcottville last winter, and is now prevailing in Winsted, and also to a limited extent, in Thomaston. Five cases of albuminuria following a light attack of scarlet fever are reported from Wolcottville.

By way of digression, it may be remarked here, that the *common* use of scarlatina is to be deprecated, because it tends somehow to confuse the minds of the laity. They get the erroneous impression that there are two diseases—scarlatina, a mild, and scarlet fever, a more severe disease of a similar character, but differing in some indefinite way from the other. The same remark may also apply to the term pneumonia.

Not a few of us can recall instances in which we have been called upon, seriously, to explain to patients the exact differeuce between the last mentioned disease and lung fever. And sometimes the incredulous layman is inclined to dispute our authority when told that the two are only different terms for the same disease.

3. Typhoid Fever.

This disease and also slow fevers of a malarial type have been uncommonly infrequent throughout the county. The only cases reported of any interest were five cases of typhoid fever in one family in Terryville, one only of which proved fatal.

The only point of interest in these cases was that the source of infection could be easily traced to the drinking water. The well which supplied the family, was dug in a solid rock, upon the surface of which rock, shelving towards the well, and covered with only a few inches of soil, the sink drain was allowed to empty its contents.

The water from this well, which was undoubtedly the source of the fever, had a clear, sparkling look, no unpleasant odor, and a not disagreeable though somewhat saline taste.

4. Diseases of the Bowels.

Dysentery, cholera infantum, and other affections of the bowels were mild and infrequent during the summer of 1875.

5. Small Pox.

Only two cases were reported. These occurred in Thomaston. The disease was imported to that locality from Ellenville, N. Y.

A prompt and thorough vaccination, done from house to house, of all persons in the neighborhood, succeeded in successfully stamping out the disorder.

The only other affections noticeable, were several fatal apoplectic seizures in old people; and three cases of puerperal fever occurring in the practice of the same physician under such circumstances as would suggest contamination by some unknown contagious element.

No new or infrequent forms of disease were reported.

The discussion by the society on the question of the circular relating to diphtheria was necessarily limited, and the views entertained by different members, though not entirely harmonious, may be briefly summarized in this report.

It was pretty generally admitted that membranous croup may be ordinarily distinguished from laryngeal diphtheria. The points mentioned as distinctive of the latter and not of the former affection, were its specific nature, contagiousness, and inoculability; its constitutional symptoms, such as albuminous urine, depressed heart's action, unaccelerated ratio of respiration to pulse, rapidity and weakness of pulse; and its occurrence during an epidemic.

Some of these points, though probably not all of them in any given case, would serve, when taken in connection with its history, to determine the nature of the affection.

Upon questions 5 and 6 of the circular, viz: Is diphtheria at first a local disease which may, at an indefinite time in its progress, become general; or is it at first a general disease, of which the affections of the mucous membranes are merely secondary localizations? the society was divided in opinion. The majority supported the latter hypothesis, though a few stoutly maintained the former. The usual arguments were advanced for the support of either side, and the question was left to be decided by others, in the only way possible, viz: by pathological experimentation.

The opinion seemed unaminous that this disease may occur spontaneously, as well as in consequence of external influences, such as variable temperature and moisture.

Question 9, "Is diphtheria a contagious disease?" was answered generally in the affirmative.

In regard to questions 10, 11, 12, and 13,—"Have you observed the prevalence of diphtheria to be influenced by the nature of the soil, by the weather or seasons, by social relations or by habitations," the members of the society seemed unwilling to express any fixed and positive opinions. No one was in possession of a sufficient number of facts in his experience to warrant any definite conclusion.

The average duration of the disease in fatal cases was mentioned as being about one week, though it was admitted that this must vary much according to the form which the disease takes, and the nature of the epidemic during which it occurs.

Good results were very generally reported from topical applications. The remedies thus used, were muriated tincture of iron, persulphate of iron, sulphite of soda, salicylic acid, carbolic acid, and nitrate of silver. These applications were made by means of a brush or swab, directly upon the fauces, and also by means of the atomizer. The use of steam by the last method was highly praised by some.

The most confidence was placed in topical treatment, conjoined with the use of tonics and stimulants, and general supporting measures.

RALPH S. GOODWIN, *Reporter.*

MIDDLESEX COUNTY.

C. A. Lindsley, M. D., *Chairman*

of Committee on Matters of Professional Interest, New Haven.

My Dear Sir: I have the pleasure to transmit herewith what matter I have been able to collect from the physicians in this county in response to the questions contained in your circular, and also contribute the following:

1. During the months of July, August, and a part of September, dysentery prevailed to an unusual extent. Intermittents until late in autumn. During the winter and early spring months bronchial and catarrhal irritation, diphtheria to some extent, and a few cases of scarlatina.

2. No.

3. No report to make.

4. With difficulty until after the detachment of at least a portion of the membrane.

5. No.

6. Yes.

7. and 8. Am not decided in my opinion.

9. Not in the same sense that small-pox and measles are contagious.

10. No.

11. Yes.

12. No.

13. No.

14. About one week.

15. Yes.

16. Saturated solution of tannin, applied with a camel's hair brush.

17. Tonic.

D. A. CLEAVELAND, *Reporter.*

TOLLAND COUNTY.

To Chairman of Committee on Matters of Professional Interest, &c.

Remarks on diphtheria suggested by some of the questions proposed by the Committee on Matters of Professional Interest.

Question 4th. Can you distinguish membranous croup from laryngeal diphtheria?

Some of the cases I have seen have puzzled me considerably. You find a patient under two years old with croupy symptoms, not very far advanced. Now it is of great importance, in the treatment of the case, for the physician to settle satisfactorily the above question. It is difficult to get a good look at the throat of the little patient; moreover, the appearance of the fauces, in the early stages of the inflammation, may not clearly indicate its character. We have febrile symptoms in both diseases. But where there is a depressed condition of the system, the patient being overpowered by the presence of a poison, it will be fair to suspect diphtheria.

If the diphtheria should be well marked in the throat, and croupy symptoms exist at the same time, it is hardly possible that you have membranous croup. Laryngeal diphtheria is well marked by typhoid symptoms, while the symptoms of membranous croup are decidedly acute. This prepares the way for a remark or two on questions 5 and 6. "Is diphtheria at first a local disease, which may at an indefinite time in its progress become general? Or is it at first a general disease or blood poisoning, of which the affections of the mucous membranes are merely secondary localizations?"

Those slight cases, whose patches of diphtheritic deposit are seen, with no decided prostration or febrile symptoms, can scarcely be called diphtheria. The presence of diphtheritic poison in the atmosphere might produce these patches in the throat (the ordinary place for diphtheria to localize), and yet, the system being strong and in a perfectly healthy condition, resists the poison.

Such cases are akin to the sympathetic cases which occur in epidemic diseases, as scarlatina and whooping cough.

Pure diphtheria is ushered in by ordinary febrile symptoms, pains in different parts, chills, pulse rapid and feeble, the vitality is much depressed,—these symptoms usually precede the localizations in the throat and other parts. The fetid breath and laboring circulation indicate clearly the presence of a blood poison, which will result in a malignant disease, and which in many instances resists

our best efforts to arrest its progress, or hold up the patient sufficiently to enable the power of nature to rally after the poison has run its course.

A word as to treatment. General principles would suggest holding up the patients by the free use of tonics and stimulants, irons, and quinine. As local applications, we have more confidence in the strong acids, such as muriatic acid, and chlorate of potash, and muriat. tinct. iron, used with great frequency.

Rockville, Ct. S. G. RISLEY, *Reporter.*

COMMUNICATION,

By Dr. C. B. Newton, Stafford Springs.

We have had, since November, 1875, a prevalent form of pneumonia of peculiar type, which may be called sub-acute, and with a tendency to solidification of the lung, and quite insidious of approach; the patient, as a rule, does not point to the ailment in a definite way, as in the more active forms of the disease. The physician, getting the hint of its presence only by the most irregular signs, such as soreness, referred to the epigastric region, or either shoulder, and instead of the characteristic cough, a hawking and raising from the throat of a frothy secretion.

Even these may be absent, and only a general malaise, directing us to no particular organ as the seat of the malady. We enquire respecting the bowels, the stomach, the kidneys, and the heart, and are answered negatively. Well, what *is it* that ails you? we are tempted to ask the patient with no marked pneumonic symptoms.

It occurs to us that we will examine by auscultation, and we find it. We have a walking patient who does not help us to a diagnosis; he may mislead us; there is no rapid respiration. Ask him if he has a cough, and he looks at you with a smile and says, "No, I have no cough; why, do you think my lungs are diseased?"

"Oh," says the doctor, "I am only hunting you over to find what is the matter with you."

Generally there is no pleurisy; if there is pain, it is contiguous to, oftener than in, the pleural membrane. Perhaps it is in the lumbar region, or it is metastatic. If at the hepatic section, we have biliary complications, more or less.

The lung reaches a state of solidity if not fully hepatized in a very insidious way, and the patient is found with this condition often at the first visit.

Placing the ear to the infraclavicular region, we find puerile respiration and the fullest resonance, move it downwards to a line of the nipple and below on one or both sides, and all normal sounds are lost. We

tell the patient to take a quick inspiration, that the sounds will be more audible, but no sound will be produced; percussion will be dull.

Examining posteriorly, beginning at the scapular part, we find resonance and puerile respiration; but as we descend, shall find the middle and lower lobes, with the respiratory function, suspended; we have dullness and stillness, save perhaps bronchophony.

The interesting question arises, how the fathers in medicine made a correct diagnosis in these latent cases of pulmonary disease before the adoption of auscultation and percussion.

Now, it matters not what a patient may say about himself, if he declares he has no cough, or pain, or difficult breathing, if dullness is found upon percussion where there should be resonance, then his sympathetic pains are given a correct interpretation, which, without the ear, would certainly mislead us. The termination has generally been in recovery, except in one or two cases, recently, where the lung is passing into a state of ulceration.

The treatment which seemed the best has been iodide potass., tonics, stimulating expectorants, keeping the air of the room *equably* dry and warm.

DIPHTHERIA.

Irving W. Lyon, M. D., Hartford.

As the committee of the State Medical Society on matters of professional interest have by a series of questions directed especial attention to diphtheria, and as this disease now exists in an epidemic form in various portions of this State, the occasion will at least justify a few remarks upon disputed points relating to the etiology, nature, and differential diagnosis of this interesting affection.

The name diphtheria was first given to this disease by Bretonneau, who in 1821 read two celebrated memoirs before the Royal Academy of Medicine, based upon careful observations made during an epidemic which prevailed at Tours from 1818 to 1820. He described diphtheria to be a specific inflammation, characterized by a pellicular exudation; a disease propagated by contagion, and identical in all respects with the putrid sore throat of Fothergill, malignant angina of Huxham, and the membranous croup of Francis Home.

In the historical portion of his second essay, after alluding to passages in Homer and Hippocrates which possibly had reference to diphtheria, Bretonneau established very conclusively that the disease which he had been studying at Tours was the same that Aratæus in Asia Minor had described about one hundred years after Christ under the name of Malum Egyptiacum.

Since the attention of the profession was called to the subject by the publication of Bretonneau's Memoirs, diphtheria has been carefully studied during many epidemics, and though our knowledge of this disease has been greatly increased, and its literature enriched with the labors of the ablest investigators, still it may be truly said, that at no time during the past fifty years have greater interest and activity centered around certain questions relating to its nature and causes than at the present day.

The committee have shown a thorough appreciation of this in-

terest by their circular questions, which embrace all the points in dispute, and to which we will now address ourselves in reply.

"*Is diphtheria at first a local disease which may at an indefinite time become general?*"

Most physicians of the present day believe diphtheria to be a systemic disease from its beginning; with these we shall not disagree. The others, a small but able minority, with Oertel as their leader, declare that diphtheria "begins as a local disease and develops afterwards into a general one;" that "the disease establishes itself at first in one spot, the focus of infection, and thence radiates, as it were, through the body, until by general blood-poisoning, it renders the organism incapable of life." The mucous membrane of the throat is the usual site of the primary or local manifestation of the disease, and this fact is explained by the lodgment here of certain parasites, which are drawn in with the inspired air. According to this view it is the local contact of the parasite, and not blood-poisoning, which causes the first appearance of the membrane. The bacterian theory of disease is thus invoked to explain the supposed local origin of the membranes which are first seen in diphtheria, and because micrococci are constantly found in the substance of these membranes, it is held that they have been transported thither from without, and act as units of contagion.

Let us look for a moment at the present status of the bacterian or germ theory.

In the debate upon "The Germ Theory of Disease," which occurred in the Pathological Society of London, in April and May 1875, (Lancet, Vol. 1, 1875,) Dr. H. Carlton Bastian, professor of pathological anatomy in University College, in a masterly address, pointed out that the present bacterian theory of disease was the logical outcome of two theories; the one, that the contagiousness of certain diseases was analogous to the "property by which one fermenting mass may communicate its state of change to another mass of fermentable material," which doctrine dated as far back as Hippocrates, and had in recent times been termed by Dr. Wm. Farr, "zymosis:" the other, Pasteur's doctrine of fermentation and putrefaction; that these processes, though chemical, were invariably initiated by low organisms. It became therefore an easy matter to combine these two views, and to hold that low organisms were the true contagia, or sole "germs" of the so-called "zymotic diseases."

Dr. Bastian then proceeded to oppose to the germ theory the following facts:—

First, that bacteria are not necessary to fermentation and putrefaction as formerly taught by Pasteur, since these two processes may be initiated in their absence, a doctrine which Pasteur himself now admits.

Second, that bacteria may be "introduced into the blood vessels of the lower animals by thousands, without producing any deleterious effects in a large proportion of the cases."

Third, bacteria habitually exist in so many parts of the body, in every human being, and in so many of the lower animals, as to make it almost inconceivable that these organisms can be causes of disease: and "in persons with open wounds bacteria are constantly to be found in contact with such surfaces, especially if the wounds are not well cared for, though the injured person does not necessarily suffer at all in general health."

Fourth, "the virulence of certain contagious mixtures diminishes in direct proportion to the increase of bacteria therein."

Fifth, "that fresh and actively contagious menstrua lose scarcely any of their contagious or poisonous properties, after they have been subjected for a few minutes, when in the moist state, to a temperature which no living units can be shown to survive (212° F.), or after they have been exposed to the influence of boiling alcohol, which is well known to be equally destructive to all recognized forms of living matter."

Dr. Bastian then developed at length an argument tending to show that bacteria should be regarded as the results, instead of the causes of those diseased processes in which they occur.

The physico-chemical views of Dr. Bastian were ably supported by Dr. Murchison, Dr. Dougall of Glasgow, and others.

Dr. Burdon Sanderson, whose eminence as a pathologist, had given great strength to the germ theory, which he had supported since 1870, as shown by Dr. Bastian, quite surprised the society and his friends, by declaring that although bacteria have an inseparable connection with certain diseases, that their true relation to these morbid processes, whether that of cause or consequence, had not and could not yet be determined; he added,

"Supposing any of us went to Recklinghausen, Virchow, Chauveau, Paget, and asked the question, 'do you believe in the germ theory?' the answer he would certainly get would be, 'I really cannot give you any opinion upon the subject. A great number of observations have been made upon the subject; you must read those observations; then if you wish to pursue it, you must make observations yourselves, and perhaps at a future time, it may be possible to come to a conclusion upon the subject.' But if they were pressed to give an answer to the question, 'do you believe in the germ theory?' I believe all of these eminent men would shrug their shoulders."

In the British Med. Journal, Feb. 26, 1876, Dr. Lionel S. Beale, in criticising some remarks by Prof. Tyndal upon the importance of a better knowledge of the relation of bacteria to disease, says, "The doctrine that contagium consists of bacteria, is opposed to broad and well known facts."

Drs. Thomas E. Satterthwaite and Edward Curtis, of New York, found that the clear liquid, obtained by filtering septic fluids through *porous clay*, was innocuous; which seemed to confirm the experiments of Burdon Sanderson, and to show that the poison was contained in the granules. Next, with a view to determine whether these granules were bacteria, their spores, or other bodies, septic fluids were subjected to such influences as are known to destroy living germs, viz: a prolonged temperature of 212° F., and boiling alcohol, and then placed under circumstances favorable to the development of bacteria; but in a number of instances no bacteria were developed, although the fluid retained its poisonous properties; which was accepted as evidence that those granules were poisonous which were neither bacteria nor their spores.—*Medical Record, Dec. 18, and 25, 1875.*

The facts and considerations now adduced in opposition to the germ theory in general, are equally available as objections to the bacterian origin of diphtheria. But before leaving the subject of the local production of this disease by parasites, it will be very pertinent to inquire why these should limit their operations to the tonsils and parts adjacent, while all other portions of the respiratory tract escape in the great majority of instances? Surely these germs as they are swept along over the 1400 to 2000 square feet of respiratory mucous membrane, ought to be able to obtain a foothold, and to produce irritation and inflammation in more than one particular place, unless Oertel, Hueter, and others, have greatly overrated their clinging, boring, and other pernicious properties.

Finally, it appears impossible to explain cases of diphtheria terminating fatally in twenty-four, (Greenhow, page 139) thirty-six, and forty-eight hours (Trousseau, page 497), with little or no membrane in the throat (George Johnson, Lancet, Jan. 16, 1875), upon the bacterian theory, which would seem to require more time for its fatal operation than is thus allowed.

It must therefore be acknowledged that this brilliant theory, though begotten within the temple of science, and fostered by her ablest experts, is yet of too feeble growth to withstand adverse criticism, or to cope with its older rival, the chemical theory.

There are those, however, like Dr. George Johnson, who, while apparently rejecting the germ for the chemical theory, nevertheless maintain that the membranous exudations of diphtheria are of purely local origin. Dr. Johnson (Lancet, Jan. 16, 1876,) says:

"I believe that the poison, whether inhaled with the air or swallowed with water, coming in contact with the mucous membrane of the fauces, or the nostrils, exerts there a local poisonous influence, and that the exudation is a direct result of this purely local action; that in short the diphtheritic poison applied to the mucous membrane, calls out the membranous exudation as the application of cantharides to the skin raises a blister. The history of cases of cutaneous diphtheria affords support to this doctrine. It is a well-known fact that in what we may call a diphtheritic atmosphere, a part of the skin from which the epidermis has been removed by a blister or other abrading agent, may become the seat of diphtheritic exudation. Trousseau, referring to these cases, expresses his belief that an "abraded surface has served as a door of admission for the disease, which for some time remains a local affection." He compares the phenomena with those which occur when a syphilitic local sore is followed by constitutional symptoms."

Next, after describing the dangers of auto-infection from the membranes when once formed, he proceeds to say, that,

"In most cases of diphtheria, there is abundant evidence of blood infection during the progress of the malady, the high temperature, the general constitutional disturbance, and the nervous symptoms and sequelæ, are results, probably of blood-poisoning. There are two distinct modes in which the blood becomes infected in these cases; first, by the direct passage of the inhaled poison through the pulmonary capillaries into the blood; second, by the absorption of the morbid products from the exudation on the mucous membrane through the lymphatics and blood vessels. As there is a class of cases, in which with an abundant local exudation in the throat, the constitutional symptoms are of the mildest character, so there is an opposite class of cases in which constitutional symptoms, the result probably of blood-poisoning, are overwhelming and rapidly fatal, while there is little or no appearance of false membrane upon the surface of the throat."

It will be observed that Dr. Johnson does not state that diphtheria is primarily a local disease, but that its membrane is locally produced, and this by the same poison, which, passing into the blood through the lungs is able to destroy life in a very short time, with little or no appearance of membrane in the throat. But inasmuch as these latter cases are very rare, he seems to attribute little influence to the diphtheritic poison introduced from without, be-

yond its power to produce faucial exudation ; for, when the membrane is once formed, all the constitutional symptoms of diphtheria may follow from auto-infection. Diphtheria is therefore with him practically a local disease at its commencement.

That the *materies morbi* of diphtheria floating in the atmosphere is sufficient to cause inflammation by simple contact with healthy mucous membranes, is difficult to believe: because, first, it is unsupported by analogy, the inflammatory lesions of no other infectious disease being thus produced by its specific poison acting through the medium of the atmosphere. Let us take for familiar illustrations, measles and scarlatina. The inflammation of the conjunctivae, schneiderian membrane and bronchi in the former, and of the pharynx in the latter, occurring after periods of incubation which often extend over two whole weeks, cannot be explained upon any theory which does not admit their constitutional origin. Second, another very great, and it appears to us, almost insuperable objection to the doctrine of the local production of the diphtheritic membrane is, as in the case of bacteria, that it offers no adequate explanation why a chemical poison so active and pungent as to irritate and inflame the fauces, should not produce a like effect upon other parts over which it passes. Why do the nares, larynx, trachea, bronchi, and lung alveoli primarily escape, and the poison evince so decided a predilection for the tonsils and parts contiguous ?

It has been said in answer, that the immunity of these parts is largely due to the ciliated epithelium with which their mucous surfaces are covered, whereas the tonsils are only protected by pavement epithelium, which is less able to resist external influences. Suppose we admit this explanation in the case of the tonsils ; how then will the well-known exemption of the vocal cords be accounted for ? These organs are covered with pavement epithelium, and are thus particularly obnoxious to diphtheritic inflammation, according to Prof. Jacobi, whose views as to the manner in which the diphtheritic poison enters the system essentially agree with those taught by Dr. Johnson. It is, therefore, especially incumbent upon these gentlemen to explain the comparative infrequency of primary laryngeal diphtheria.

But, says Dr. Johnson, cutaneous diphtheria supports the doctrine of local origin. In diphtheritic atmospheres abraded surfaces may become the site of pseudo-membranous exudations, from which constitutional symptoms follow. Let us briefly consider the evidence offered by this feature of the disease.

In most epidemics, cases of cutaneous diphtheria are rare, and as a matter of fact, attested by the literature of the subject and the experience of practicing physicians, the vast majority of cases are secondary to the pharyngeal disease, and therefore occur in subjects presumably more or less under the influence of the diphtheritic virus. So it would be very difficult, if it were necessary in these cases, to prove that the membranes upon the abraded integuments were due to poison received from the atmosphere.

Other cases may be explained by contact with secretions from patients sick with diphtheria; this, it is well known, is not only the explanation given of cutaneous diphtheria by Bretonneau, and since extensively adopted by the profession, but is, moreover, susceptible of the most direct proof, as in the following instances:

Bretonneau being summoned to the Ecole Militaire, in 1826, saw a pupil "who was kept in the infirmary for excoriated chilblains, and who had wet one of his feet in a little pool of sputa, which moistened the brick flooring at the bedside of one of the patients sick of diphtheria. An excessively painful ulceration was the consequence of the contact; it was established between the toes, and was covered with false membrane, and the disease thus inoculated yielded only to the employment of a solution of nitrate of silver, and afterwards to the soothing and cicatrizing action of calomel."—*Bretonneau's Memoirs, by Semple, p.* 184.

Case II. "At Graeay (Indre) an unweaned male infant was seized with diphtheritic sore throat, which was prevailing as an epidemic. Up to his death his mother suckled him; her nipple soon became invaded by the special inflammation, and covered with false membrane, the extension of which was arrested by appropriate treatment."—*Trousseau's Clinical Medicine, Vol. 2, p.* 520.

Case III. Was mentioned at the last meeting of the Hartford Co. Medical Society, April 27, by Dr. George A. Moody of Plainville, Conn., who afterwards communicated the particulars to me by letter.

A child was seized with diphtheria of the fauces, on the 13th of February, 1876, and died on the 17th. A lady, who had an abrasion upon her thumb, attended this child on the 16th and 17th, and after its death washed the child and laid it out. "There was a large discharge from the nose which she frequently wiped away, and is certain that some of the matter came in contact with the sore. She came home on the evening of the 18th, and her thumb pained so much that she poulticed it that night without alleviation. In the morning, I (Dr. Moody) examined the thumb and found the abrasion covered with an exudation resembling a diphtheritic exudation in the throat. I applied the dry persulphate of iron, which very soon changed the character of the sore, and it healed rapidly. There was some constitutional disturbance, headache and fever, which subsided with the improvement of the sore."

That systemic infection may follow cutaneous diphtheria is freely admitted. This was long ago pointed out by Trousseau, and so far as we know, is not questioned by anyone. But while we do not wish to deny the *possibility* of atmospheric inoculation of abraded surfaces, we must insist that this method is not only exceedingly hypothetical, but, as already shown, an assumption altogether gratuitous, as contact with the more tangible secretions from subjects sick with diphtheria is not only a probable explanation of these cases, but is also a demonstrable method of inoculation ; reference is particularly made to such cases as occur in subjects not suffering from the pharyngeal disease.

We will also add that the analogy sought to be established between the fauces and an abraded cutaneous surface, is rather forced; the former being in its normal physiological condition, and the latter a traumatic surface.

But there is another fact connected with these cases, also pointed out by Trousseau, to which we wish to direct particular attention; and this is, that faucial diphtheria may also follow diphtheritic membranes beginning upon other parts of the body. Trousseau, Vol. 2, p. 523, says:—

"Diphtheria primarily developed on the skin may become the starting-point of pseudo-membranous pharyngeal and laryngeal affections."

Oertel, in discussing this question, admits that the appearance of diphtheria in the fauces, after its inoculation upon the skin, would support the general doctrine that faucial diphtheria was the result of previous blood-poisoning; but he was led to deny the fact of this sequence, because no pharyngeal membranes were developed in rabbits upon which he experimented.—*Ziemssen, Vol. 1, p. 581.*

With a view to elucidate this point, the following cases have been collected:—

Case I. A woman aged 21, at the full term of her first pregnancy, was delivered with forceps, Nov. 19, 1859. On the second day peritoneal symptoms were developed. These continued, but on the fifth day a large diphtheritic patch appeared upon the vagina. The throat was attentively watched, but remained clear until the ninth day, when it became the seat of the diphtheritic exudation. The patient, who had steadily lost ground from the first, sank and died on the morning of the tenth day.—*Trousseau, Vol. 2, p. 509.*

Case II. "Very recently I was asked to see a girl ten years old, who for some days had had behind the ears diphtheritic patches, developed probably on an eczematic surface; the throat, however, was in turn at-

tacked, and when I saw the child, I found both tonsils covered with false membranes."—*Op. Cit.*, *p.* 521.

Case III was related to me by Prof. Wm. H. Van Buren, of New York. A number of years ago, he was called in consultation to see a woman who had been confined in a cellar. She was unable to pass her water, the inability being due to tnmefaetiou of the labia. Upon separating these organs, their mucous surfaces were found to be covered with diphtheritic membrane. A day or two later a blistered surface upon the abdomen also became covered with the diphtheritic exudation. In about eight days after the first visit, the throat, which had been watched, and which had escaped up to that time, was attacked with diphtheria: the patient died.

Case IV. We are indebted to Dr. John L. Campbell of New York, for the following facts. About ten years ago he was summoned to a child, aged three years, in convulsions. The child had had a warm bath, and in the hurry and excitement of the occasion, one foot was scalded and denuded of its epithelium. In about two days the abraded surface was covered with a membrane, which had the appearance of a diphtheritic exudation. The fauces were healthy, but Dr. Campbell remarked to the family, that diphtheria of the throat might occur. Two days later diphtheritic membranes appeared in the fauces.

Case V was recently communicated to me by Prof. Jacobi of New York. About fourteen years ago, a little girl, a dispensary patient, had diphtheria of the vagina, the membrane was extensive. The throat was at first clear, but it was watched and in from two to four days afterwards became the seat of diphtheria.

Case VI. Notes of this case were received from Dr. Willard Parker, through the courtesy of his son, Dr. Willard Parker, Jr. About fifteen years ago, Dr. Parker saw in consultation, a young lady aged about twenty years, who had a diphtheritic membrane upon the cheek, which had formed upon a superficial abrasion. "The membrane appeared on the face within a day or two after the injury, (possibly three days,) and was followed by diphtheria in the fauces."

Case VII. Dr. L. S. Wilcox of Hartford, has communicated to me the following particulars. A male child, aged eleven months, whose father was at the time very sick with faucial diphtheria, was attacked in June, 1858, with the disease. The membranes first appeared about the folds of the neck and groins, which were affected with erythema intertrigo. In from three days to a week after these parts were attacked, the disease appeared in the fauces. The child, which had vomited and become very sick and exhausted, only lived a day or two after the beginning of the pharyngeal disease.

Now in these cases, it would probably be claimed by Oertel, that

bacteria, and by Johnson, that diphtheritic air inoculated the abrasions in the first instance, and that the faucial disease was locally produced by the same agencies, but was only a little later in appearing: that the membranes in the different situations were perfectly independent each of the other, and were, so to speak, mere coincidences.

There is one possibility, however, which they themselves would have to admit, and this is, that in some of these instances, particularly in the puerperal cases, the primary inoculations might have occurred in other ways than through the air, *i. e.*, through the accoucheur or nurse, and this would somewhat complicate these alleged coincidences, which are at best rather awkward and embarrassing to explain upon the theory of independent local origin.

We prefer, therefore, to think with Trousseau, that these primary diphtheritic patches were the "starting-points" of the pharyngeal disease; and thus find in cutaneous diphtheria, to which Dr. Johnson referred us, evidence quite as strong against, as in favor of the local origin of faucial diphtheria.

Finally, the beneficial effects of topical treatment have been emphasized, and the question asked, what explanation of this fact could be given, consistent with the theory of previous blood-poisoning?

The force of this argument is fully admitted. We have repeatedly witnessed the most salutary results from topical applications, and would not forego their use in any case; but we never neglect to employ constitutional and supporting measures, and wish particularly to point out, that this is the case in the practice of all, even the most ardent advocates of the local theory. Constitutional treatment is therefore found a necessary concomitant to the local.

The good results obtained from certain topical applications, are probably due to their influence in limiting or modifying the pharyngeal inflammation, and thus preventing the extension of the diphtheritic exudation; and, second, to their power of disinfecting the necrotic pseudo-membranes, by which putrid absorption and septicæmia are prevented. In order to show that the general symptoms of a constitutional disease may be favorably affected by treating its local phenomena, scarlet fever need only be adduced. In his excellent work upon *Diseases of Children*, Dr. J. Lewis Smith of New York, referring to scarlatinous angina, says:

"But the employment of remedies directly applied to the faucial

surface, is much more effectual in reducing the pharyngeal inflammation, and preventing inflammation of the cervical glands and connective tissue which is so apt to supervene upon and complicate the faucial inflammation, and produce tumefaction along the sides of the neck. For, the adenitis and cellulitis indicate a dangerous form of pharyngitis, and are, I believe, in many instances produced or intensified by absorption of the decomposing secretions, which are lodged in the depressions upon the faucial surface. Now gargles or washes, properly employed, not only diminish this inflammation, but prevent the septic poisoning."—page 177.

Before leaving this branch of the subject we cannot refrain from alluding to the change which the professional mind has undergone during the past ten years regarding the local treatment of this disease. Our present epidemic is a mild one, and whatever treatment is employed will obtain reputation; but at some future time, when a graver type of the malady shall present itself, such as we have all seen to our discomfiture, we will again find with the illustrious Trousseau, that there is a "form of diphtheria in which local manifestations go for little as compared to the general symptoms, and in which topical treatment is of exceedingly little use." —Vol. II, p. 512.

Having thus opposed at some length the doctrine of the local origin of diphtheria, we will now simply enumerate facts which appear to support the theory of the constitutional or blood origin of this disease.

These are, first, that it occurs in epidemics.

Second, that the epidemics are variable in type as in other acute infectious diseases.

Third, that it has a period of incubation, which ranges from two to fourteen days.

Fourth, that one or more of the following constitutional symptoms, viz: malaise, drowsiness, chilliness occasionally amounting to shivering, febrile reaction, with headache, aching of the limbs and loins, and sometimes nausea and vomiting, may precede the faucial exudation from a few hours to a few days (Greenhow).

Fifth, that the disease is communicated to others by contagion and by inoculation.

Sixth, that adynamic and toxic symptoms, more or less profound, rapidly follow the invasion of the disease.

Seventh, that

"In the rapidly fatal malignant form, there seems to be a simultaneous poisoning of the whole system: when the characteristic pellicle *begins* to

appear on the tonsils, and in the nasal fossæ the whole economy is *already* profoundly altered. Fortunately, the rapidly fatal is the most unusual form of the disease, though in some epidemics it is too common."—*Trousseau, Vol. I, p.* 498.

Eighth, that albuminuria is often present, beginning sometimes as early as the second or third day.

Ninth, the occurrence of paralysis as a sequel to a certain proportion of cases.

Diphtheria is a disease due to a specific poison received into the system from without. This poison is given off by persons sick with the disease, and communicated to others by contagion. It also arises spontaneously or *de novo*, that is, from other sources than those sick with diphtheria. The nature of the poison is unknown; it is held by Oertel and others to consist of minute vegetable organisms—micrococci—but as already shown this theory cannot yet be accepted. It is epidemic in its manifestations and appears to be little influenced by the nature of the soil, season of the year, state of the weather, social relations, or habitations, provided these latter are kept clean, and the air within them is not contaminated with foul emanations, from sewers, drains, or other sources.

This leads us to the consideration of a point in the etiology of this disease, which, until quite recently, had been almost neglected, and which even now is far from receiving that attention which its importance demands. We refer to the agency which filth exercises in intensifying the diphtheritic poison. We use the term intensifying advisedly; for though the filth *origin* of diphtheria has been strongly suspected by the ablest physicians and sanitarians, it must nevertheless be admitted that this doctrine is yet in need of further confirmation. Cases of this disease are met with, in which, after the elimination of contagion, the most scrutinizing investigation fails to detect the presence of filth in any form. This, according to information derived from my friend, Dr. E. G. Janeway, the present health commissioner, has been found to be the case in New York city, where, of late, this subject has been carefully studied by competent observers. The explanation of such cases, in the present state of our knowledge, must therefore be referred to that all pervading influence, the epidemic poison, which of itself is often competent to produce the disease.

But that the diphtheritic poison very often arises from sewers, drains, cesspools, and from the ground immediately surrounding

dwellings, which has become polluted with slops and other house refuse, there can be no doubt. Physicians who habitually inspect the hygienic surroundings of their sick, are well aware of this fact, and always regard the occurrence of diphtheria in a house, as evidence of the possible existence of some insanitary condition which calls for immediate investigation and correction.

The relation of filth to diphtheria is illustrated by the following cases :

Case. I. A few years since, a physician of this city sickened with malignant diphtheria and died. After his death it was discovered that the servants had thrown the slops and garbage of the house into the cellar, the bottom of which was covered in some places, one and two feet deep with putrescent animal and vegetable matter.

Case II. Two children of a family, made up of the parents and six children, residing in this city, were seized with diphtheria, Dec. 5, 1875. On the 7th, two more were taken; one again on the 10th, and one on the 12th; finally, on the 13th, the father became sick; the mother only escaped. Of these seven cases three died, aged respectively four years, two years and two months, and thirteen months. The others recovered. One boy aged seven years had paralysis of the muscles of deglutition. The three children first taken were seized with headache and vomiting. The premises were examined March 8, 1876. The house was not supplied with city water, the water being obtained from a well nineteen feet from the back door, and twelve feet deep, in sandy soil. The privy was twenty-five feet beyond the well. There was no sewer in the street. The kitchen sink was drained through a lead pipe, which emptied into a sink in the cellar, and the pipe from this latter sink terminated in the open mouth of a drain, which, starting in the cellar, ran underground, and discharged into a ravine about fifteen rods away. This drain was tapped a few feet from the house and received the slops from two other houses near by. The ravine end of the drain opened into the air. During the summer the slops were thrown out of the back door upon the ground, because the drain had become obstructed; this was dug up during the first week of November, and the obstruction removed, so that the sink water ran off into the ravine. But as soon as the drain had been opened a bad smell, like that of "dead rats," filled the house, and was constantly complained of by the family, particularly when the wind blew.

Here, then, was a drain which had free communication with the cellar, into which it discharged its foul effluvia, which passed up into the house and poisoned the occupants. In this case there had been no known exposure to diphtheria; there were no cases of this disease in the immediate neighborhood; the children did not attend school, nor had

the family either visited or been visited by any one for a long time, and then by none who were sick at the time or afterwards.

Case III. In an adjoining town ten persons, in a family of thirteen, were attacked with diphtheria as follows: the first on the 26th of November, 1875; second, November 30th; third, December 1st; fourth, December 2d; fifth, December 3d; sixth, December 4th; seventh, eighth, ninth, and tenth, December 8th. Of these the second, third, and fifth died, all on the 8th of December, aged 8½, 2, and 6 years. The others recovered. This family had not been exposed to diphtheria, so far as they knew. No case of the disease had occurred within a mile of the house, and this a month previously. We examined the premises March 11, 1876. The rear of the house projected over the cellar wall eight or ten feet, making a low shed, which was closed in, except on one end. The ground bottom of this shed was lower than the ground just outside. Inside of this shed was a cistern, and an unused well, which the physicians in attendance had found emitting a foul odor, and had ordered to be filled with dirt. The apartments over this space were washrooms and a bedroom. The house, designed for two families, had two washrooms, the sinks of which discharged by leaders down the outside of the partition which enclosed the aforesaid shed, and into covered drains which emptied upon the surface of the ground about fifteen feet from the house. At the time of my visit these drains were stopped, and all the slops and refuse water from the house were emptied by the servants, both into the sinks and out of the two back doors, in such a way that large quantities had run back into the shed, and thence through the cellar wall into the cellar, so that the inside of the cellar wall was covered with slime. But the gentleman, who is one of the best and most intelligent of men, assured me that this could only have been of recent occurrence. The ground around the back part of the house was soaked with slops and emitted a sour and musty odor.

Case IV occurred in the family of one of the best farmers in Hartford county. The family consisted of ten persons—five adults and five children, the youngest three and the oldest eighteen years of age. All five of the children had diphtheria in February, 1876, and three of them died, aged three, five, and seven years. There had been no exposure to diphtheria except by the father, and that full six weeks prior to the outbreak in his family. The premises were carefully inspected April 1st, 1876. Everything was in excellent order, save one thing. The pipe carrying off the sink water from the house emptied into a tile drain, which ran underground and discharged into a covered barrel about five rods from the house. There was no trap in the pipe under the washroom sink, and at my visit a very offensive odor came from this pipe, with draught sufficient to extinguish a lighted match.

Case V. The following is an example of what is constantly occurring in the practice of physicians in this city. In a house upon one of

the best streets, three cases of diphtheria occurred in children, early in March, 1876. Four pipes connecting with the sewer were found each without traps. Two years ago, in this same house, there were two cases of cerebro-spinal meningitis, one of which died.

With reference to this matter Dr. George Johnson says:

"When a case of diphtheria occurs in a house without evidence of importation from without—still more, when several cases occur together or in quick succession—there will be good reason to suspect that sewers, cesspools, or contaminated water may be the source of the disease. My belief is that in a very large proportion of cases there is as close a relation between diphtheria and insanitary conditions as exists between typhoid fever and similar insanitary conditions; and I scarcely need say that if this be so, the general recognition of the fact is of the greatest importance with reference to the adoption of preventive measures. There is reason to believe that much more harm would result from ignorance of the filth origin of diphtheria, than from practically ignoring its infectiousness."—*Lancet*, *January* 2, 1875.

Can Membranous Croup be distinguished from Laryngeal Diphtheria ?

Should one be called to a case of laryngeal stenosis, in which no membrane could be seen, except a little, deep in the pharynx, and be asked to decide whether the disease was diphtheria or true membranous croup, it might be very difficult to determine. If diphtheria were prevailing, the patient an adult with symptoms of adynamia, and if it be further known that he had been exposed to persons sick with diphtheria, it would be safe to conclude the membrane diphtheritic. If on the other hand the patient be a child, and no cases of diphtheria about, it would be proper to diagnosticate membranous croup. But should an epidemic of diphtheria be present, it would be difficult to feel sure, in many cases, as to the character of the membrane.

But the question is a broader one than here supposed, and involves the identity or non-identity of the two diseases known as diphtheria and true membranous croup.

Were one to try to determine this question by reading the recent literature upon the subject, particularly that which comes from abroad, he would soon find himself in a sea of doubt and perplexity. Thus in France, since the time of Bretonneau, and chiefly through him and his celebrated pupil Trousseau, the doctrine of the identity of these two diseases has been taught by the leading pathologists. In Germany, opinion is divided. In Great Britain,

two distinguished physicians, Sir William Jenner and Dr. George Johnson, have recently pronounced in favor of the identity of these affections, as has also Prof. Jacobi of New York, whose reputation as a physician and pathologist, secures for his views marked attention. Sir Wm. Jenner and Dr. Johnson argue that a membrane-producing inflammation is a specific inflammation, and inasmuch as diphtheria and membranous croup have pseudo-membranes which are alike, they conclude that these diseases are identical. Jenner also finds in the clinical history of membranous croup additional evidence of its diphtheritic character, viz: that the urine may sometimes contain albumen. He admits that membranous croup is not contagious, but explains that this fact "should no more separate a single case from diphtheritic croup, than should a single case of scarlet fever, because it did not spread, be separated from other cases of scarlet fever."—*Lancet, January* 16, 1875.

On this point Dr. Johnson is somewhat ambiguous. He says nothing of contagion till closely interrogated by Dr. Moxon, when he says:

"Everyone who is engaged in private practice must know that a single sporadic case of unquestionable diphtheria in a family is of common occurrence. To assume that a disease cannot be diphtheria when it shows no tendency to spread to other members of a household, is to ignore the plain teachings of daily experience."—*Lancet, March*, 1875.

When asked by Dr. Moxon whether in meeting with a case of sporadic croup he would "enforce the same precautions as when a case of sporadic scarlet fever appears in a family?" he answered:

"Not the same precautions, certainly; but if I am called to a case of sporadic membranous croup, which I hold to be synonymous with laryngeal diphtheria, I of course isolate the patient, believing that the disease, though much less infectious than scarlet fever, is in a perilous degree infectious, and I cause a most careful search to be made for the insanitary conditions in and around the house, which, in the absence of infection from a previous case, I know must have been the exciting cause of the case."—*Lancet, March* 20, 1875.

But (and we wish to call particular attention to the fact,) Dr. Johnson does not mention one single instance in which a case of sporadic membranous croup communicated either membranous croup or diphtheria to others. His views as to the contagiousness of sporadic croup, seem therefore to be deduced from his theory respecting the nature and cause of this disease, rather than from the actual observation of cases.

These two physicians, therefore, base their belief in the identity of membranous croup and laryngeal diphtheria, chiefly upon the fact that the membranes are alike in both; and Jenner finds additional evidence for his belief in the occasional occurrence of albuminuria in croup.

That the membranes in these two diseases are alike, or very similar, is now quite generally conceded; but it is not so generally conceded that the inflammatory processes of croup and diphtheria are therefore of the same character; or, as it has been expressed, that identity of result necessarily implies identity of cause.

Since no anatomical grounds of distinction exist, appeal must be had to the clinical manifestations of these two diseases; and as we have nowhere seen these better given than by Dr. J. Solis Cohen, of Philadelphia, we will reproduce them as they appeared in the Medical Record, February 19, 1876.

"CROUP.	DIPHTHERIA.
Non-specific in origin.	Specific in origin.
Never contagious.	Often contagious.
Not inoculable.	Inoculable.
Not of adynamic type.	Of adynamic type.
Usually sporadic.	Usually endemic or epidemic.
Rarely attacks adults.	Often attacks adults.
Always accompanied by exudation.	Sometimes unaccompanied by exudation.
Fatal only by physical obstruction to respiration, whether directly or indirectly.	Often fatal without any physical obstruction to respiration whatever.
No depression of heart.	Marked depression of heart.
Pulse often strong and hard.	Pulse never strong and hard, even though quick and full.
Respiration more accelerated in proportion to the pulse; ratio rarely if ever less than one to four.	Respiration not accelerated in proportion to the pulse; ratio usually less than one to four.
Albumen rarely in urine.	Albumen often in urine.
Not followed by paralysis.	Often followed by paralysis.
Would bear antiphlogistics.	Would not bear antiphlogistics.
Rarely attacks more than once.	Often attacks more than once."

To this list of clinical differences, three important additions may be made, as follows:

CROUP.	DIPHTHERIA.
Cutaneous pseudo-membranes always absent.	Cutaneous pseudo-membranes sometimes present.
Most prevalent in the cold months of the year.	Little influenced by weather and the seasons of the year.
Larynx principal seat of membrane.	Membrane usually situated above the larynx.

In explanation of the fact that in membranous croup the lesion is seated in the larynx, Prof. Jacobi offers the following:

"The vocal cords are deserving of special mention. They form the borders of the narrowest entrance into the lungs. Foreign substances, no matter whether of benign or malignant character, will be retained by them. They are supplied with pavement epithelium, which is the principal seat of diphtheritic degeneration. They have no mucíparous glands, nor have they lymph-vessels. Thus, if there is any organ predestined for diphtheria, it is the vocal cords. Where there is not poison enough for a thorough infection, there is still enough for a local deposit. When diphtheria has died out as an epidemic, the stray cases with limited infecting power will be known for years or decennia as so-called sporadic membranous croup, as you would speak for a generation of an occasional case of sporadic cholera, or a stray case of variola. There is not infection enough to poison the throat and larynx and blood, but just sufficient for the most favorable place, the vocal cord."—*Journal of Obstetrics, February*, 1875.

The insufficiency of this explanation will become very apparent from the following question: If the vocal cords are so sensitive to the diphtheritic poison as to become affected when "diphtheria has died out as an epidemic," how does it happen that the larynx usually escapes when the diphtheritic poison is at its height? for in the same paper from which we quote, Prof. Jacobi has occasion to point out that laryngeal diphtheria is fortunately rare in protracted epidemics of this disease.

There remain, therefore, clinical differences between membranous croup and diphtheria which can neither be ignored nor explained away, and which justify the belief that these two diseases, though having points of contact, are nevertheless far from being identical.

CENTENNIAL ANNIVERSARY

OF THE NEW LONDON COUNTY MEDICAL SOCIETY.

By Ashbel Woodward, M. D., of Franklin.

Read at the annual meeting of said Society, April 6th, 1876.

The Centennial Anniversary of American Independence is at this time turning the thoughts of our people not only to the early history of our country, but also to those institutions, which, born with the Republic, have grown with its growth, and strengthened with its strength. It is a matter of general interest, as well as of local pride that the physicians of New London County were the first in the Colonies to take the initial step toward the organization of a medical society for mutual improvement and good fellowship. The efforts in this direction began in 1763, were fully consummated a dozen years later.* So that our society is at this time about to enter upon the second century of its existence. At that time the pure mathematics with the departments of astronomy and natural philosophy were the only branches of science which had made any very material progress. Chemistry had but lately been rescued from the hands of the alchemists. Just a century ago oxygen was discovered. This was the first step in the series of brilliant discoveries which have since made chemistry the basis of many of the exact sciences and the science of medicine possible.

Though the physicians of that period possessed but a modicum of the exact knowledge enjoyed by the physicians of to-day, their

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*The Society was organized on the voluntary principle, in the month of September, 1775. At the first meeting Dr. John Barker was chosen president. To this office he was annually re-elected to the time of his death in 1791. It is said that at the earlier meetings, which were held monthly, Dr. Philip Turner gave lectures on military surgery. The exciting scenes at Bunker Hill, the perils of which he witnessed, might have hastened the organization of the association as one of the means employed to meet the pressing needs of the medical department of the army. Two years later Dr. Turner was appointed Surgeon General of the Eastern department of the American army.

successful efforts to associate for mutual improvement indicate that they were animated by the right spirit. Their petition was preferred to the Colonial legislature in 1763, prior, as already stated, to any attempt at medical organization elswhere on this continent.* This movement made in advance of the age was negatived in the lower house. Still it indicates one of the most important crises in the history of the profession. The presentation of that unpretending memorial from the physicians of New London County, was the initiative proceeding in a series of efforts which have since resulted in the permanent establishment of many flourishing State Societies, and within a few years of the National Association, which has contributed in a high degree to purify the ranks, elevate the aims, and make a *real* unit and fraternity of the profession in America.

In the attempts alluded to, it was not the object of the petitioners to secure any immunities or exclusive privileges for themselves, but to protect the health of the community by additional securities. They were not insensible to the great truth that if they were in their associated capacity to become honorable, and extensively useful, the elements of their greatness and prosperity must be found to exist inherently within themselves. At that time there was no authority in the State legally qualified to confer degrees in a way to discriminate the man of solid acquirements from the ignorant pretender. Our memorialists wished to strike at the root of the evil. To shut down the flood-gates through which their ranks were inundated by incessant streams of ignorance and charlatanry, and to establish a standard of education by making a respectable amount of attainments an indispensable pre-requisite, they asked for the appointment of a committee, legally authorized to examine, and approve candidates if found qualified.

Thus the physicians of New Loudon County, though unsuccessful in their first attempt, were the pioneers in the cause of American medical education and organization.

Of the transactions of this Society subsequent to its organization we know but little. The medical libraries in the hands of our predecessors of that period were meagre, and confined to a few elementary works. There being neither schools nor hospitals, beginners were compelled to depend, to a great extent, upon the oral in-

* The State Medical Society of New Jersey, and the County Medical Society of Litchfield County in this State, were both organized in 1766. It will thus appear that the physicians in each of those localities were three years later in their original movements than those of New London County.

struction of men who had acquired skill by experience. The bare fact that an association was formed, and that meetings were held shows that the young were anxious to learn, and the old willing to communicate.

The Society to whose origin your attention has been directed, and to which we all are endeared by association, has completed its first one hundred years. We have already passed the boundary which separates the past from the future. As we enter upon a new epoch is it extravagant to indulge the hope that when the history of another century shall be made up beneficent results in larger proportions may be apparent?

Let us then in the century upon which we have entered pursue with zeal, whatever promises to advance the dignity, the honor and usefulness of our common calling.

ON THE PRACTICE OF MEDICINE,

AS CONDUCIVE TO HEALTH AND LONGEVITY.

By Isaac G. Porter, M. D., of New London.

Read before the New London Co. Medical Society.

Fouquier, a physician of note, selected as the topic of his inaugural thesis: "The advantages of a feeble constitution." The sentiment may seem paradoxical, but not more so, perhaps, than the claim of this paper, calling up before the mind, as it does, all that the physician is called to endure in his irregular meals, broken rest and exposure to the severest weather. Both imply care and attention in the conduct of life, the one, in knowing the situation and accepting it, and the other, in a wise appreciation of the innate vitality and recuperative power of the human organism, as well as the laws of physiology and hygiene.

The injunction, "know thyself,"—your physical constitution and stamina, and your proclivities to certain diseases, is, eminently applicable. Doubtless, the original stock of vitality, both in the valetudinarian and the average physician, differs. As the feline species are notoriously hard to kill, while rabbits succumb to a trifling blow, so there are corresponding differences in the human race. Let each one know to which class he constitutionally belongs.

The essay of Fouquier may have been designed as an encouragement to persons in feeble health, but we offer no such hollow compliment. It is generally thought that, if a man has phthisis or strong indications of it, especially in our laborious profession, his usefulness is at an end. That this opinion is erroneous is shown by frequent examples. The writer is cognizant of a case where this disease seemed actually established, and as the family history favored the diagnosis, the sufferer relinquished all hope of recovery. But having a wife and child dependent on his efforts, he resolved that rather than "sit him down and close the book of

fate and die," he would make the most of life, by fulfilling its duties with whatever strength remained, and that so long as he could mount a horse, (for he lived many years since,) he would decline no call, by day or night. Clothing himself with particular care, under this discipline, he soon began to improve and ultimately recovered, and did many years of good service. Here there was no change of climate, no housing behind double windows, no idle self-indulgence because of debility, but he was impelled to action and sustained in it, by energy and purpose. The tone of his stomach was maintained, and he was cheered by a sense of duty performed, of self-respect, and self-approbation. The pure air of heaven oxydized his blood, and active exercise, by driving and walking, forced it into his lungs, expanding every air cell even in the apexes. Thus he had better sanguification, better circulation, better appetite, better nutrition, better sleep, and more cheerfulness and contentment.*

Having traced the practical influences of our profession on pulmonary affections, let us next inquire how the case stands when the chylopoetic viscera are in fault. The "Journal of Health" maintains that ordinary dyspepsia requires nothing but proper exercise in the open air with due attention to quantity and quality of diet. Granting that appropriate medication, as most physicians believe, expedites the cure, none know better than ourselves how much our mode of life tends to ward off and relieve indigestion, constipation, and "liver complaint." Liebig lays down the law, that, in proportion to the absorption of oxygen is the need of food, and usually

* More than one of the writer's acquaintances, saying nothing of himself, might have sat for this picture, but none (on the whole) more appropriately than our late professional brother, Dr. Wm. Hyde of Stonington. One of our number, in a spirited sketch of him, says: "Dr. Hyde died Sept. 25, 1873, of tubercular consumption, æt. 65 years, having been an invalid for nearly one half of that period, but was in his carriage, for air and exercise, the day before his death. He was a man of great industry, courage, and unflinching perseverance, which pushed him into the open air, and on visits to his patients, when most men, with less love for their profession, would hardly have ventured from their doors. He possessed a strong desire to be useful, and as soon as he could get out again after his ill turns, this singleness of purpose would stimlate him to bear his accumulated labors." The writer met him once in consultation far from his home, and shortly before his death, when we were interrupted by a fresh return of hæmoptysis.

Through force of character, does the mind, by rising superior to the body, govern and sustain it, otherwise, than by leading to the adoption of a wise course of means to secure the end? Clearly the discipline in this case did much toward extending his usefulness quite to the allotted borders of human life.

its healthy appropriation. In any disease, especially if chronic, what can be more beneficial than a stream of healthy blood passing to the suffering organ?

I might next speak of the efficacy of the direct rays of the sun, actinic, or, as endowed with the extraordinary power over vegetable and animal life, of blue and purple light, but pass the subject since their influence is not fully settled, and it is difficult to decide how far the supposed benefits are traceable to a simultaneous inhalation of the open, pure air of heaven.

But how are *nervous* diseases affected by the out-door life of the physician? At the outset, let me name two aphorisms: First, "All nutritive changes are dependent, ultimately, on nerve influence;" and the other, "The blood is the regulator of the nerves." Their application in neuralgia, hypochondriasis, insomnia, and nervous asthenia will be readily seen by an audience of physicians—the writer merely quoting, as true and beautiful, the expression of Romberg, when speaking of neuralgia: "It seems as if pain were the prayer of the nerve for healthy blood."*

Scarcely a disease can be named where the knowledge of the physician may not inure to his own benefit, either in the way of prevention or of early medication, but the writer will refer to only one more—viz: prostatic troubles and their proper treatment, as recently and ably set forth by Sir Henry Thompson, and Drs. Van Buren and Keyes of New York. By early resort to self-catheterism with the soft catheter, and injections, in obstructive urinary diseases, decomposition of urine with its disastrous consequences, is avoided, and a life, likely otherwise to be miserable, prolonged and rendered tolerable.

But there are influences calculated to promote health in the physician, which act through his mental constitution and the nature of his employment. He aims to do good by relieving human suffering, and if it be "more blessed to give than to receive," reflex benefits inure to his own soul. He encounters variety at every turn;

> "Toiling, rejoicing, sorrowing,
> Onward through life he goes."

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* Insomnia, if ever found in our own persons, we treat, much as would a certain Arab sheik, on the confines of the Great Desert, who had quite a local reputation as a doctor. An English physican, traveling with him, inquired: "What do you do with sick people who can't sleep?" The answer was: "We set them to watch the camels."

His body, one hour in action, is the next, perhaps, in repose. But his mind is ever busy, and hope, fear, joy and anxiety succeed each other, like shadows over a plain. But, how does this promote health, or prolong life? It does so, on the principle that mind and body sympathize, and "a cheerful heart doeth good like a medicine." The writer has often found, when suffering from that form of headache which usually yields to nothing but sleep, and duty required evening visits to very sick patients, that either the walk, or finding them better than was expected, dispelled the pain, as if by magic. So, when suffering from any other physical discomfort demanding rest and quiet, and a call is made for our services, and a question of duty as between ourselves and others arises, we often think, "It is but a *single* visit, and I will make the sacrifice." We go, inhale the fresh air, perhaps enjoy pleasant social intercourse, and return rejoicing. One, not a physician, may possess the requisite energy to go out at stated times, but lacking perhaps, healthful mental stimulus, he fails to receive the boon in full measure.

A single remark respecting the alleged exposures, hardships, and dangers of the profession, is all that is requisite. Much surprise is often expressed that we so seldom contract contagious diseases. Is it that the state of receptivity of the body is modified, and we become acclimated, as it were, by our fearlessness, and that insusceptibility, engendered by the out door exercise, which immediately follows the oft-repeated exposures? As to hardships, these, to many, have been much curtailed by the introduction of railways. Long fasting and tedious journeys by carriage are thereby avoided, and, if at any time, a meal is lost, the next is eaten with a zest and relish quite like that of boyhood. If our nocturnal rest be broken, the repose of the succeeding night is so deep and sweet, that it quite makes amends for the previous sacrifice. Paley maintains, in his chapter on "Human Happiness," that a man may enjoy more in a life time for an occasional and moderate amount of pain, (for the sake of contrast, and upon which the attention may fasten and spend itself,) than, if there were unvarying health and entire exemption. Thus, compensation comes in and converts some of our trials into "blessings in disguise."

There is, perhaps, no calling in life where it is so reputable and so practicable to continue long and late in the harness, as that of the physician. Fortunately too, while there are many in the community who prefer a younger man as most likely to possess mod-

ern improvements, yet the masses honor experience and practically say: "added years must bring added wisdom." He who has spent an active life, now in its decadence, makes a sad mistake when he "counts himself out," from his active compeers. Nothing keeps our faculties so bright as constant use, and no one grows professionally rusty so rapidly as a physician, when he drops his accustomed course of thought and reading. So long as ability and opportunity to work are extended to us, who, be he rich or poor, will allow himself to be regarded as an old hulk, dismantled, and lying unnoticed in the harbor, unless, perchance, like some old Ironsides, he may be pointed out as having, in the past, accomplished deeds that entitle him to honorable remembrance? Who would not rather, by continued effort, enhance health, cheerfulness, and length of days?

Within the last eighty years, ten physicians have died in this city,* representing, as they did, our medical practice for more than a century, whose mean, or average age, was over seventy years. Two of the number had, while in practice and preceding it, strong consumptive tendencies, who entirely recovered. Two others, not included, died soon after crossing the threshold of the profession. It is obvious that, if we are mainly students rather than practitioners, or we enter the profession as invalids, or become so before attaining medical patronage, the prospect of improvement must be much less than where a practice had been secured sufficiently ample to afford all requisite out-door exercise, variety and alternation of mental stimulus, etc.

The views advocated receive, moreover, confirmation from the Carlisle and other tables, which furnish the laws of mortality in the different avocations of life, physicians standing near the head.

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* Strictly speaking, one died in New York, but was interred here.

ON DRAINAGE AND SEWERAGE.

B. W. Catlin, M. D., Meriden.

Two years since a committee of one from a County was appointed upon drainage and sewerage. Failing to make a report last year, the committee were continued, and in the published proceedings were styled a committee on sanitary science.

We propose at this time to consider that branch of sanitary science relating to drainage and sewerage according to our original appointment.

A report on this subject in order to be of permanent value should be founded on well established facts. In order to obtain them I addressed in 1874, a circular to each member of the committee. No reply was received, except from Dr. L. S. Paddock, of Norwich. In 1875 I again wrote to each County member, and received replies from Drs. Paddock, Wainwright, and Hazen. I feel much obliged to these gentlemen for their communication, and shall refer to them as I proceed.

It is embarrassing to commence our report with so few facts and observation from our own State. At present we must depend chiefly upon observation made in other States or countries.

Drainage and sewerage, though sometimes confounded, are distinct, each regulated by its own laws.

Some have supposed that sewerage applied to cities, and drainage to the country, when in fact drainage is as necessary and important in the city as in the country, and sewerage to a limited extent is useful in the country.

The object of a drain is to carry off the superabundant water, and should be made of loose stone, porous tiles, or stone laid dry without cement or mortar, admitting water freely throughout its course.

The most perfect drain, and one that is important when there is considerable water, is formed by laying flat stones on the bottom of

a ditch previously dug, the walls on each side covered with flat stones. Quite efficient drains can be made with ordinary stones found in such abundance on most of our Connecticut farms, by placing the larger stones at the bottom of the ditch. Drainage in distinction from sewerage has been almost wholly neglected in all our cities, and they are suffering from this already, and will suffer in the future more and more unless attention is paid to this important subject.

It is a very common practice in all our cities while laying out streets, and preparing lots for buildings, to obstruct the flow of the natural streams by filling up low places with improper materials. This was notably the case in the City of New York, and investigations have shown that over this obstructed stream, and low place, many diseases have been much more prevalent than in more favored parts of the city. From the best information we can obtain, every city in Connecticut is pursuing a similar course. There is no drainage except surface drainage, and that afforded by imperfect sewerage. Dr. Wainwright of Hartford reports drainage "in certain out portions, Parkville and the North Meadows." Connecticut, owing to its geological formation, has a better natural drainage than many other parts of our country, still it might be greatly improved by systematic efforts.

For many years previous to the last ten, our State has been free from malaria. In certain localities changes have occurred which fully accounted for the prevalence of intermittent fever, and other malarious diseases, while in other places the situation remains the same that it has been for many years. How do we account for this? We say there is an epidemic influence in addition to local causes. But what is this intangible epidemic influence? It is something we cannot weigh or measure; neither see nor feel. We see certain effects; not knowing the cause we imagine one.

If we had a perfect, systematic drainage we might find that epidemic influence existed only in our imagination.

The removal of the causes of malaria is not all that we expect to accomplish by drainage. It is the settled belief of our most eminent sanitarians that the cases of consumption, neuralgia, croup, quinsy, diphtheria, pneumonia, pleurisy, bronchitis, cerebro spinal meningitis, erysipelas, typhoid fever, and diarrhœal diseases are at least increased and aggravated by soil saturation.

We have few statistics from our own State to establish these opinions, but must depend upon other sources. According to Dr. Buchanan's investigation, wherever the drying of the subsoil had been

effected either by the construction of drain-sewer, or by special drains, and deep storm culverts, when the system of surface drainage was completed the mortality of consumption had decreased in some large communities 50 per cent.

"In Salisbury, for example, after surface drainage the death rate from consumption decreased 49 per cent; in Ely, 47, Rugby, 43, Branbury, 41, and in thirteen other towns there has also been a remarkable diminution although not to the same degree."*

Dr. A. N. Bell of Brooklyn, N. Y., in his address before the American Medical Association, at Detroit, in 1874, Transactions, page 367, compares two wards in Brooklyn. He says: "Take for example, an old and well-built up ward (the third) containing a population of 9984, which is not known to have any soil saturation, its situation being such that the ordinary street grading and sewer culverts effectually drain it.

The deaths from consumption in this ward last year were fourteen, or 1.40 per 1,000 of the population. An adjoining ward (the sixth), with a population of 28,296, of corresponding large area, however, it being even less densely built up than the former, but about one-half of it subject to soil saturation, had of deaths from consumption 171, 6.04 per 1,000 of population. Sixty-one of these deaths occurred in hospitals situated in this ward, and were in part from other wards. But after deducting the whole sixty-one, there still remain 4 per 1,000, or nearly three times as many deaths per 1,000 of population from consumption over this area of soil saturation as in the one devoid of it."

Gen. E. L. Vicle, in his report to the Board of Health (N. Y.) for 1870, page 442, as quoted in the Transactions of the American Medical Association, says: "It is a well established fact that the principal cause of fever is a humid, miasmatic state of the atmosphere, produced by the presence of an excess of moisture in the ground, from poisonous exhalation constantly arising and carrying into the systems of those who inhale it, a virus which, if not sufficiently intense to produce fever, has such a disturbing effect upon the function of some organ as to weaken the general system and act as a powerful predisposing cause of some of the most common and fatal maladies to which the human body is subject."

The situation of the State of Michigan is so different from Connecticut that it would seem unwise even to compare them, but it

* Transactions of the American Medical Association 1874, page 437.

may be claimed that "if a partial drainage of Michigan has greatly improved the health and prolonged the lives of its inhabitants," a full, systematic, perfect drainage of Connecticut might confer similar benefits upon our people.

In 1857 the legislature of Michigan passed an act for the drainage of swamps, marshes, and other lowlands, which was amended in 1869 and 1871. The last amendment provided for the election of a township drain commissioner. Dr. Kedzie says "probably no laws have been enacted in this State which have done more to promote the general welfare than these drainage laws." Within the last ten years large areas have been drained.

In the New York Daily Times of February 14, 1876, I find some curious comparisons between Michigan and Georgia by Dr. Henry B. Baker, Superintendent of Vital Statistics of Michigan. In Michigan the death rate is shown to have been decreased at each succeeding census. In 1850 it was 1.14; 1860, .99, and in 1870, .94, or a decrease of 1,139 deaths. In Georgia, in 1870, the number of inhabitants was almost precisely the same as Michigan: Georgia, 1,184,109; Michigan, 1,184,059; but the death rate in Georgia was 1.15, nearly the same as in Michigan in 1850, being more than it was in Georgia in 1850, when it appears it was 1.10.

The fact that the death rates have at different times been about the same in the two States may be an indication that the lessened death rates in Michigan in late years is not altogether owing to natural advantages of climate, etc., but may be due to the same intelligent forethought of the people which has found expression in State laws for the drainage of swamps and the promotion of research into the causes and methods of preventing sickness and deaths. Michigan established a system of vital statistics in 1867, and a State Board of health in 1873. Georgia has not yet established a system of vital statistics, although it organized a State Board of health in 1875.

Most of our cities have carried out a system of sewerage. New London, from a report from Dr. Porter, has done nothing, as a city, for sewerage.

Meriden, in accordance with a suggestion made by myself to the council, has had a complete survey, made under the direction of Mr. Cheesbrough, of Chicago.

From the best information we can obtain, the system of sewerage thus far adopted is more or less defective; often a cause of disease rather than a preventive.

Sewers, in distinction from drains, should be made perfectly air and water tight, except at proper ventilating points.

We cannot learn that there is any ventilation of sewers in our cities, except at the street openings.

It is a well known fact that large quantities of gas are generated in sewers. This, of course, rises, or is pressed up to the highest parts of the sewer, and much of it escapes into our houses either through imperfect traps or where there are no traps.

All connection with sewers, either in houses or streets, should be trapped as perfectly as possible, and the traps constantly flushed with water. Openings to remove surface water should have grates to collect the solid articles, which should be often removed.

Though we advocate trapping, we must acknowledge that none yet adopted have been so perfect as to prevent the escape of gas into our houses and streets. In order to prevent this we must thoroughly ventilate our sewers. This may in some places be secured by connection with the high chimneys of our manufactories. Every house should have a ventilating pipe connected with the sewer which can be conducted into the chimney, or outside of the house like a water conductor.

E. P. Augur, engineer for the city of Middletown, in his report to the sewerage committee, writes: "The importance of providing some means for the ventilation of sewers is made more apparent each year by scientific research and experience. Such sewers, if not properly ventilated, are only elongated cesspools—retorts for the production of deadly poison, which must find egress either at the street inlets, or through the water traps of house connection, into the close rooms of dwellings." An ordinary trap of three inches depth of water will resist the passage of sewer air or gas only when the pressure of the same is less than 1–10 lb. per square inch. A strong wind blowing into the mouth of an unventilated sewer, or the compression of the air in the sewer caused by the increased volume of water during heavy rain, will often create a sufficient pressure to cause the sewer gas to break through the water-traps and find its way into the close apartments of houses, poisoning the air in them, and often causing disease and death."

Our city physicians should thoroughly investigate the facts relating to the diseases caused by sewer gas so as to be able to report at some future time.

Dr. Wainwright, in answer to the question, Do you know of any diseases or cases of disease caused by the escape of sewerage gas?

says such cases are numerous. Gen. E. L. Viele, in an article read before the Health Association at Baltimore, last November, upon the subjects of the report, gives a full and much more able paper than I have time or ability to prepare. He says: "The ventilation of street sewers must be secured in one way or another. The poison must escape somewhere. If forced into the house pipes. it will come through the wash-basin, the bathing-tub, and the water-closets, diffusing itself through the atmosphere of the sleeping apartments, doing its deadly work in the stillness of the night." He exhibited a section of a five-inch lead-pipe of the heaviest kind which was perforated like a colander by these gases, which were thus enabled to escape into the house, disseminating through the apartments, producing, as they did, the serious illness of the inmates. There could be no stronger evidence than this, if one were to rise from the dead.

The question arises, How is all this to be prevented? To answer this we must examine the arrangements in general use for house drainage, as it is called. In the first place, there is a pipe in the cellar, or beneath it, leading to the street sewer. This pipe has a fall of about one foot in sixty, and connected with it is a vertical pipe leading to the upper chambers to receive the water from the washing basin and bathing-tubs, and the refuse from the water-closets. "Now there is not one man in ten thousand who can tell whether or not the soil-pipe of his residence has a trap connecting it with the street sewer, nor is there one instance in a thousand where such a trap is in existence; consequently, as a general rule, the sewer gases of the whole street have free access into the soil-pipes of the houses. But these gases are supposed to be stopped by the small traps under the basins and the large trap under the water closets. Yet whenever the latter is used a vacuum is created, which causes the smaller traps to empty themselves, and thus a score of openings are made throughout the house to admit the free passage of the poison. To remedy this there must first be a trap connection between the soil-pipe and the sewer; associated with this must be a ventilator to the soil-pipe in the rear of the house, either through the house leader or a separate tube. There must be also an air connection with the water closet pipe, to obviate the draught on the smaller pipes, which without this will always take place."

I have discussed the sewerage question from the stand-point of the system generally adopted and in use in this country; but I am

constrained to express the conviction that the system as a whole, and the manner in which it is carried out, is radically wrong, and cannot be pursued except at an enormous sacrifice of health and loss of life.

I draw this conclusion from the experience of every large city in this country and my own personal observations. I do not believe that a house has yet been constructed that is absolutely free from the contamination of sewer gases. There is no question whatever, in my mind, that an entire change and substitute for the present system must be found before communities can be regarded as protected against the most insidious of all the evils that have come to be regarded as inseparable accompaniments of densely populated cities.

So far as the pneumatic system has been developed it has accomplished all and even more than was originally claimed for it, and domestic refuse is successfully removed by it in a most thorough and quiet manner, without offense and at an absolute profit.

How far this system can be successfully applied in this country I am not prepared to say, but I will say in view of the many complications which are constantly arising all over the country in connection with the sewerage question, and the terrible evils that are, beyond doubt, directly due to this source, it becomes a matter of serious consideration whether it is not the imperative duty of either the National, State, or Municipal governments in this country, to take some steps for testing the pneumatic system in America.

If it shall be found to work here as successfully as it has been conducted at the Hague and as economically, it is due to the position we occupy as a civilized and intelligent people; that this system should be substituted for the present defective and dangerous method of removing excremental refuse.

The simple principle of this system is the creation of a vacuum in a receiver, located at street intersections; which receiver is connected by pipes with the houses on the streets, so that the excremental water is drawn from the houses with wonderful rapidity and removed in a thorough and innocuous manner, and so free from offense that ladies and children attracted by the novelty of the operations, stand watching them in close proximity without being made aware by evidence of their senses of the character or purpose of the process.

This use of atmospheric pressure to carry from our houses in an

almost instantaneous and silent manner, that which would desolate them if suffered to remain, seems to be a matter so simple as to leave no room for discussion.

When in years to come this plan shall have been universally adopted, the present generation will probably receive a large share of commiseration for their ignorance, and the unnecessary suffering they were compelled to undergo.

An article upon the sewerage of Boston, published in the New York *Herald*, May 7th, condemns the proposed plan of constructing an immense sewer to Moon Island, and recommend the Heidelberg system. This pail system, as it is called, is carried out in different ways in different places. In Heidelberg, the pails are made of strong sheet iron, and are firmly connected with the soil pipe, a syphon trap being interposed at the point of junction. The pail is of a cylindrical shape, 32 inches high, and $18\frac{1}{2}$ in diameter. Ventilation is also secured by carrying the soil pipe to the roof or beside the chimney.

These pails are removed more or less frequently and their contents used for manure, which pays the expense of the whole system.

The system has also been introduced into England, and in such places as Rochdale and Birmingham, a special disinfecting fluid is placed in the pails to prevent decomposition and the bad smell arising from the contents.

One of the most serious evils arising from sewerage matter is the contamination of the water supply for domestic uses.

Fortunately for Connecticut all our cities are supplied more or less abundantly with water supposed to be pure.

Disease from this source is perhaps more frequent in our country towns than in the cities. Many cases might be mentioned and more discovered, if physicians were more careful to investigate the causes, of sickness which come under their care.

Several years since, I attended a family where four from a family of six had typhoid fever, two young children died. The father of the family and a young daughter though very sick recovered. I inquired diligently for some local cause about the cellar and house, but did not for the time discover any satisfactory one. I afterwards learned that the slops from the sink were thrown out or run upon the garden near the house and well.

The house afterwards passed into other hands and a cesspool was dug in the garden so near the well that its contents drained into it, so that on washing days there was a marked rise in the

water. Fortunately before any sickness occurred the cesspool was removed to a greater distance from the well. Last October I was called in consultation to a neighboring town where there had been already three deaths in one house, another lying sick, and others complaining. The attending physician had inquired diligently for a local cause. He suspected the water supply, but was informed that it was from a spring of pure water brought in iron pipes, but after some delay the spring was examined, and the bones and hair of a woodchuck were found in the spring—this was cleared out and water from other sources used, and the two last cases recovered.

Dr. L. S. Paddock reports an instance where several cases of typhoid fever occurred in the same house or locality, where the sink outlet had become obstructed, and an unusual amount of sickness in Taftville, a village in Norwich, which evidently was owing to the contamination of the water in the wells from house sinks and privies.

Dr. M. C. Hazen reports cases as follows: "I was called in consultation to see a case of dysentery in an adjoining town, where the cause of the disease which had already carried off two of the family was, as seemed to me, no doubt, from the use of water from a well which had been contaminated by a privy vault, which was on the bank directly above the well. In the same vicinity was another house on the side-hill where nearly every inmate of the family suffered severe sickness from a similar cause."

"A gentleman of wealth and refinement erected in a suburban town a large and commodious dwelling of fine architectural appearance, and supplied it with every modern convenience. The interior of the house was replete with elegance and good taste in keeping with the means and education of its owner.

"Surrounded by a charming household, among whom were three lovely daughters just budding into womanhood, he had every reason to anticipate the enjoyment of a life of comfort and true happiness. But in a few short months he saw each of his daughters one after another sicken and die of the typhoid fever. His home was made desolate, his happiness forever destroyed, and unable to discover the cause of the disease he abandoned the house, which remained for a long time without a tenant, and was at length sold for half its cost.

"The purchaser was a horticulturist whose familiarity with matters of drainage as a necessity to the life of plants, led him to suppose

that he could by a careful examination and improvement of the drainage and sewerage of the entire premises, remove all probable or possible causes of typhoid fever.

"In proceeding to do this he first removed the lower floor of the house and found there the earth saturated with sewage matter which through an improper arrangement of the pipes had been suffered to escape.

"The error rectified, the house is in every way unexceptionable as a residence."*

Many a fine residence, and many of our farmers' houses as well as those of our mechanics, are exposed to similar danger.

The physicians of Connecticut should be educated to the importance of making accurate observations respecting the sanitary condition of their several localities. I know from experience how difficult it is for a physician in full practice to find time for observations, not immediately connected with his daily business. But we never know what we can do till we make an earnest effort. No one should be satisfied with a superficial observation and performance of merely routine duties. He should with great care investigate the cause of every disease coming to his observation; and if any sensible and removable cause is found, to insist upon its removal. If this was done many wells would be found where the water is rendered impure by drainage from privies, sink drains, and hog-stys.

This is the case sometimes when the water is free from bad taste or smell.

We need sewerage on a small scale in rural towns as well as more extensive ones in cities.

Every farmer and every mechanic should have air-tight sewers to conduct off filth to some distance from his residence, there to be mixed with dry earth or ashes to make manure for his garden or his farm. Privies should be so constructed that they can be frequently cleaned and deodorized. Few know the value of excremental matter for manure.

Every well acts as a drain upon the soil and subsoil for a considerable distance around—few persons are aware of its extent. In some soils it is claimed that it extends one hundred feet in all directions.

In conclusion I would remark that the subject of drainage and

* Gen. Viele's Address.

sewerage cannot be fully treated within the proper limits of a report to this society. It would require a volume to contain all that is important.

I cannot flatter myself that I have given much that is original, but if I shall succeed in securing the attention of the members of the profession to this important subject, so far as to induce them to make accurate observations, and record important facts relating to the prevention of disease I shall be rewarded for the effort I have made.

B. H. CATLIN,

Chairman of Committee on Drainage and Sewerage.

LARYNGEAL PHTHISIS.

C. W. Chamberlain, M. D., Hartford.

This term was formerly used to include all chronic affections of the larynx involving ulcerative or destructive changes of its tissues, especially the cartilages, nor was it until the time of Louis that the pathological lesions of the larynx accompanying phthisis were at all accurately described, although various monographs from a clinical standpoint had previously appeared. A most complete and exhaustive *resumé* of all then known on laryngeal affections under this general title, was published by Trousseau and Belloc, in 1837, nor were any very important additions made to our knowledge until after the utilization of the laryngoscope in practical medicine. The facilities it offered for the study of the various diseases of the throat awakened an unusual activity in this department, as by its aid, the commencement and progress of laryngeal disease could be watched and studied upon the living, when before its results were only revealed after death. Thus rendering scientific accuracy and precision possible in the recognition of laryngeal affections, it opened an inviting field for study in a new and to a great extent unknown region. Since then the term laryngeal phthisis has been shown to be of a much more limited applicability. It is not, perhaps, strictly correct as implying a separate and independent disease, rather than a local manifestation, or complication of a general condition. I shall use it to include all the affections of the throat associated with pulmonary consumption; the same general conditions underlying the changes in larynx or lung, the dyscrasia striking now at the one organ, now the other. The earlier symptoms, dry cough with indications of laryngeal irritation occurring alike when tubercular deposit involves either, renders it difficult often to prove its existence in the larynx before any affection of the lungs. It is, however, generally admitted, that decided and grave disease of the larynx often precedes any

lesions of the lung that can be made out by the most careful physical examination. These cases occur in persons predisposed to phthisis, and give early indication of the pulmonary symptoms that will sooner or later supervene. A careful examination will determine the phthisical nature of the laryngitis.

Without entering into the relation of tubercle to phthisis, the latter might be defined as a disease characterized by a deposit, or thickening, which exhibits great proneness to degenerative changes, depends on a systemic cause, and is markedly inheritable. While the multinuclear giant cell of Schüppel is fast traveling towards the limbo of Lebert's tubercle corpuscle, and other specific elements of disease, and the tubercular nature of any lesion is not to be decided by the presence of any one specific element, nevertheless the histology of tubercular growths is characteristic, and is thus given by Wagner:

"Tubercle is an infiltrated or nodular, almost always multiple, round or irregularly formed, for the most part miliary, non-vascular new formation, of varying size, consisting especially of nuclei small and large, indifferent cells and giant cells, all imbedded in a reticulated tissue; it constantly passes, after long duration, into softening, and appears rarely as a local affection, but most often as a constitutional disease."—(General Pathology.)

A similar reticulated tissue is described by Burdon Sanderson, although he ascribes it to an overgrowth of natural adenoid or lymphatic structures, and its cells as not differing from normal lymphoid cells. The lymphadenoid nature of tubercle, and the presence of lymphatic tissue in the normal membrane of the larynx, as shown by Heitler, would be very significant, especially as he shows this tissue to be most abundant in the ary epiglottic folds, over the arytenoid cartilages, and the first parts of the ventricles of Morgagni, the precise locations where tubercuious ulcerations and deposits most frequently occur. This brings us to a disputed question; do tubercular deposits occur at all in the larynx, and if so, do they play any important *role* in the production of the laryngeal lesions, or are these all adequately explained by catarrhal or follicular inflammation and ulceration?

In the literature of the subject very conflicting views are found, as might be easily inferred from the widely differing theories concerning the pathology of phthisis. The views concerning the relation of tuberculosis to the lesions in the larynx vary pretty uniformly with the author's opinions concerning the nature of the

changes in the lungs, although strangely enough, Louis, finding no evidence of miliary tubercle in the larynx in any of the large number of cases he examined, attributed the ulcerations to inflammation, which might be caused by the sputa excoriating the mucous membrane. Similar negative testimony is given by Alison, Rühle, and others; on the other hand, Cruveilhier decided the lesions to be non-tubercular from the absence of caseous degeneration. Andral, Laanec, Trousseau, and others of the older writers considered the ulcerations which occur late in phthisis as undeniably of a tubercular nature, and Hasse carefully demonstrated the similarity of the anatomical elements which the microscope revealed, to others which were admitted to be tubercular. The views first promulgated by Rheiner have had a very wide acceptance, and undoubtedly are correct in a certain number of cases, while others are incapable of satisfactory explanation in any such way. He describes a catarrhal or follicular inflammation followed by ulceration, attended with a thick cellular infiltration of the mucous and submucous tissues, produced by a rapid multiplication of already existing elements, the thickened margin of the ulcers caused by serous infiltration. (Lebert Anat. Pathologique, p. 594.) Mackenzie modifies this by assuming imperfect cellular elements, and a special constitutional condition inherited or acquired. Rindfleisch accepted substantially this view, admitting however the presence of tubercular granulations in the larynx, occurring especially where two surfaces are rubbed together, but considered they acted only as a permanent irritant, the changes being due mainly to inflammation, although in Ziemssen's Cyclopædia he describes a tuberculization of the larynx which is secondary to catarrhal inflammation, and occurs in scrofulous subjects.

Rokitansky and Virchow assign a much more important place to tubercle as a cause of the pathological changes in the larynx; the latter indeed recommends this as the best place to study true tubercle, and explains much of the negative testimony by the fact that the granulations so soon break down into shallow ulcerations. Jaccoud,* whose classification is followed essentially by many of the modern French writers,† describes a primary tuberculosis of the larynx with discrete tubercles, and a laryngitis of the tuberculous with infiltrated tubercle. Isambert qualifies this by denying that

* Anat. Pathologique.

† Fauvel, Mandl, Thaon, Eugéne and Bœckel.

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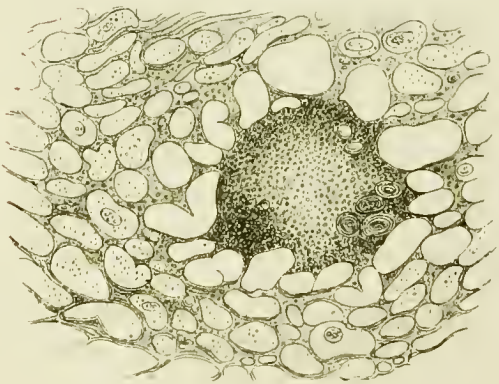

the two varieties can be separated by any sharp cut line, still he admits the existence of both classes of cases.

Wahlberg describes the characteristic appearances of tuberculous ulcers, and deposits in the larynx after a thorough and careful study, and illustrates their minute anatomy in a series of beautifully executed microscopical drawings. The same elements that characterize tubercular deposits elsewhere are found here; a granular center surrounded with cellular infiltration, the round lymphoid cells, giant cells, and indifferent cells all imbedded in a reticulated network; this infiltration occurs alike around the nodules which have not yet broken down into ulceration and around the margins and base of the ulcers. The epithelium over the nodules is changed from the normal ciliated variety into pavement epithelium. The network of capillaries which surrounds the ducts and their glands explains the more frequent occurrence of cellular infiltration around them, as this is produced by wandering cells from the blood vessels. Tubercular nodules are also found where the glands and their follicles are still normal, thus excluding any invariable connection with catarrhal or follicular inflammation. (Stricker's Jahrbücher Medicinische, 1872.)

The microscopical drawings, chiefly from Wahlberg, exhibit the characteristic structure of the tubercular lesions of the larynx. The first shows a section through a tuberculous ulcer; the second, through a tubercular nodule which has not yet broken down into ulceration, the thinning of the epithelium in the center showing where it will give way; the third, magnified about 400 diameters, shows a multinuclear giant cell in the center with irregular outline and no limiting membrane, the reticulated network surrounding and enclosing imperfect and altered cellular elements.

I shall consider the affections of the larynx accompanying phthisis as divisible into two classes,—the tubercular, characterized by the presence of tubercles either primarily or secondarily, and the non-tubercular, including those which present no evidence of the presence of tubercles at any stage of their progress, but which are nevertheless decidedly characteristic.

The earliest indications of implication of the larynx, constituting what might be called a pre-tubercular stage, as it is almost pathognomonic, are a marked and general anæmic condition of the membrane of the larynx, characterized by a decided and peculiar pallor, which sometimes extends to the pharynx soft palate and uvula, the interlacing capillaries showing very distinctly at times;

associated with this condition is a simple weakness or feebleness of the voice which drops or fails in reading or singing; speaking is often effected with difficulty, while some tones are not produced at all or with great effort, and the continuous use of the voice leaves a tired, strained feeling in the throat. In cases of general anæmia this laryngeal symptom loses its characteristic value, and not very infrequently anæmia of the larynx accompanies uterine derangements; excluding these, this condition is often of marked value in diagnosis. Direct faradisation of the vocal cords is often serviceable, and the application topically of stimulating solutions tends to relieve the anæmia by inducing a freer blood supply.

Aphonia also occurs as a symptom of incipient tubercular disease in the lungs without any implication of the larynx. This, called by Romberg phthisical aphonia, is caused apparently by a reflex irritation of the laryngeal nerves, due to disturbance of the peripheral branches of the pneumogastric by the tubercular processes in the lungs. The tensors of the vocal cords lose contractile power, and when phonation is attempted with the mirror in position, the vocal cords, while presenting their normal white, glistening appearance and brought well together, appear loose, wrinkled, or shriveled. This differs from hysterical aphonia, where the adductors are at fault; though as both sets of muscles are supplied through the recurrent laryngeal, both are sometimes implicated in phthisical aphonia, though not often. Those measures that improve the general health and condition are here most serviceable. The following cases illustrate this form:

Mr. B., aged 30, occupation sedentary, had been troubled with impaired voice for several months, the huskiness and difficulty in using the voice were increasing, so that at the time I saw him but few tones were clear, and these not invariably, while after speaking a few words with great exertion, the voice would be reduced to a mere whisper. A careful examination of the lungs revealed a small spot of consolidation near the apex of the left. Laryngoscopic examination disclosed no evidence of any organic changes in the larynx, nor congestion of its membrane; the epiglottis was a little twisted. The vocal cords were normal in appearance, but when phonation was attempted appeared loose and wrinkled, while brought well together.

Mrs. S., aged 37, mother of four children, had had partial aphonia for several years, about the same in degree, and not markedly progressive. I saw her about a year before her death, which occurred from metritis after childbirth. There was a similar condition of the larynx to that just described; the vocal cords when examined were not *perfectly*

adducted, while they appeared wrinkled and almost thrown into folds. There was consolidation at the apices of the lungs. The post-mortem examination revealed a portion at the apex of both lungs about as large as a small orange completely solidified, with a tubercular deposit, and patches of cretaceous material here and there; the process had evidently been arrested, as the remainder of the lung was healthy. The membrane of the larynx was pale and smooth, with no sign of present or pre-existent ulceration. The whole larynx was somewhat atrophied, the epiglottis shriveled and a little twisted.

A careful laryngoscopic examination easily determines the nature of the aphonia excluding that from pressure on the recurrent laryngeal nerve by aneurismal or other tumor, or from functional disturbance of the uterine organs. Indeed, aphonia is a most uncertain and unreliable indication of the amount of organic disease of the larynx. As we have seen, nearly complete aphonia, lasting for years, may exist without the slightest change in the membrane of the larynx, while the most extensive ulcerative changes may exist with but little, if any, impairment of the voice, as was demonstrated long ago by Klemm. The implication of the voice depends upon the situation of the congestion or ulceration, rather than its extent, although sometimes with the slightest changes there is marked aphonia.

In some cases there succeeds to this stage of anæmia a deposition of yellowish nodules about the size of a pin-head, with a glistening surface, most abundant in the upper and posterior portions of the larynx; some congestion and tumefaction occur, which increase as the nodules break down into ulcerations, but never become marked. There is an increased and thickened secretion which excites a short irritating cough, and protracted efforts for its expulsion. A feeling of dryness and uneasiness, with occasionally prickling, tingling sensations in the throat, are often accompanying symptoms; pain is not usually prominent, and even in the later and deeper seated lesions, local pain is never so great as the changes in structure would seem to warrant. While cases of this nature are described by Gibb, Schrötter, and many others of the best laryngoscopists, and by them considered tubercular, they are ascribed to follicular inflammation by others. That in some cases at least, these nodules are tubercular, would seem to be decided by the researches of Wahlberg.

Superficial ulcerations soon occupy their site; they are irregularly circular in outline, usually multiple, exhibit a marked ten-

dency to spread and unite with adjacent ulcerations, and are covered with a muco-purulent secretion, not unlike that attending catarrhal ulcerations, as there is nothing characteristic in the broken down material of tubercle. Often the congestion is limited to the immediate neighborhood of the ulcerations, the other portions of the laryngeal membrane still remaining paler than normal. These ulcers, if they continue, involve the deeper tissues, and then the congestion and tumefaction becomes more marked. The aphonia varies from a harsh, husky voice, dependent on congestion, to almost complete loss of voice, when the ulcerations involve the vocal cords or their insertions.

Three cases among the fifteen, of laryngeal phthisis, which I have had under observation, were seen at this stage, and as they were carefully observed for months while under local treatment, and several years have elapsed since treatment was discontinued, a brief outline may be not uninteresting.

All three were males, under thirty, of New England parentage, and strongly predisposed to phthisis by inherited tendencies. Two were seen before the tubercular nodules had broken down into ulceration; in the third there were superficial ulcerations upon the epiglottis and over the arytenoid cartilage of the right side, leaving the border of the epiglottis somewhat crenated when the ulcerations healed. There were no pulmonary lesions discoverable by a careful physical examination. A short, irritating cough, with but little expectoration, was a common symptom, which was relieved with the restoration of the larynx to a healthy condition. The voice was more or less implicated in all, simple weakness, or inability to use the voice, in reading or speaking for any length of time, in two, while the third exhibited the husky voice characteristic of congestion of the vocal cords. The general health was markedly impaired, with considerable loss of weight, though not rapidly progressive. General tonic and hygienic measures had been thoroughly tried without any decided benefit. The treatment consisted in application to the larynx, directly, by means of the brush, of different stimulating and astringent solutions, at first at short intervals, which became longer as improvement manifested itself. These varied, mainly salts of iron, copper, or zinc, alternately, and direct spray and inhalation of medicated gases or vapors. The nodules apparently broke down into shallow ulcerations, which exhibited a strong tendency to spread, and healed slowly, requiring about eight or ten months of continued local and general treatment before the membrane was restored to a healthy appearance. Simultaneously with the improvement in the local disease the general condition improved. Two of the three upon regaining health, removed to

higher altitudes—one to Denver, the other to Minnesota, and have thus far had no recurrence of laryngeal trouble, nor any evidence of commencing trouble in the lung; the other remained well so far as throat and lungs were concerned for three years and a half, when a recurrence of laryngeal trouble occurred—an ulceration near the location of a former one, and involving the deeper tissues, accompanied with bloody expectoration from the rupture of capillaries involved. There is now quite decided evidence of incipient tubercular deposit in the lung. The ulceration in the throat yielded to similar treatment, and a temporary change to a higher altitude has decidedly improved the general condition.

There is another class of cases characterized by great tumefaction and congestion, without any evidence of tubercular deposit or ulceration. The swelling involves the ary epiglottic folds on each side of the laryngeal opening, which, when the tumefaction is marked, form two pear-shaped tumors, the larger ends meeting at the cartilages of Santorini and Wrisberg, the smaller directed towards the epiglottis. The epiglottis is generally involved, forming often a large globular tumor, and causing extreme difficulty in swallowing, from the pain occasioned by the passage of food over its tender, inflamed surface. The larynx is bathed in a thick, milky, probably purulent, secretion; attacks of dyspnœa recur frequently, and a rapidly fatal termination is the rule. The symptoms may resemble stricture of the œsophagus, owing to the mechanical interference with the act of swallowing, caused by the excessive tumefaction; and in addition to the distressing attacks of dyspnœa, the breathing may become labored and stridulous, from the narrowing of the *rima glottidis*. Marcet advises scarification in such cases, although death from suffocation rarely, if ever, occurs.

The following case illustrates this form:

Mr. B., aged 36, hotel keeper, had been troubled with an irritative cough, difficulty in swallowing solid food, and inability to sleep in a horizontal position, being obliged to take a semi-erect position, otherwise he had suffocative breathing, as if there were a foreign body in the throat. The throat was exceedingly sensitive, and it was only by the use of small pieces of ice, allowed to dissolve slowly in the mouth, that any examination was possible; this revealed a tumefied epiglottis, a round, globular shaped mass, rendering a view of the larynx almost impossible, the upper portions of which were swollen, but not to so great an extent. There was no ulceration at this time, nor during the progress of the disease, which was rapid. The tumefaction increased, aphonia, which was at first slight, became complete, recurrent attacks of distress-

ing dyspnœa became more frequent and severe, and the interference with nourishment increased with the tumefaction, until swallowing became almost impossible, from pain as well as mechanical interference. Death was caused mainly by the local processes, as there was never any extensive disease of the lung, but decided evidence of tubercnlosis. Treatment could be only palliative, and did not arrest the progress of the disease.

Sometimes the epiglottis is principally involved; at other times the tumefaction is confined to one side of the laryngeal opening.

In scrofulous cases there is often a similar swelling of the epiglottis and upper portions of the larynx, this, however, seems to be caused by a thickening of the sub-mucous fibrous tissue; these cases are of long duration, and generally end with secondary tubercular ulceration; the membrane of the larynx, on inspection, however, is pallid and almost white, but differs from anæmia in its glistening appearance, and the tumefaction that accompanies. This sub-mucous fibrous proliferation also occurs in syphilis, and is occasionally fatal from obstruction; the diagnosis sometimes is difficult, as mercurials which might aid to establish it are contra-indicated in phthisis. Cancerous affections are much more easily distinguished; the lesions of syphilis more closely resemble those which accompany phthisis.

In other cases after a well marked stage of congestion and tumefaction, the latter not so excessive as in the form just described, ulcerations occur upon the vocal cords or near their posterior insertion, also on other portions of the larynx as well as upon the epiglottis. These ulcerations involve the deeper tissues, and are sometimes accompanied with severe burning pain. They are often secondary to tuberculisation of the larynx from inflammation, and attended with grayish nodules which show distinctly through the congested membrane. Aphonia from tumefaction precedes ulceration, becomes complete when this involves the vocal cords, and when once established continues until death. Interference with swallowing proper nourishment and medicine, is progressive in degree, and caused not only by the pain produced by contact of the substances swallowed with the swollen and tender structures, but also by pressure through the œsophagus upon the ulcerated and sensitive laryngeal tissues. The persistent cough, the often recurring attacks of dyspnea, and the interference with the proper nourishment of the patient, combine to render this a most unfavorable complication. The depression caused by the loss

of voice with no evidence of improvement, adds also no small share to the influences which retard recovery. Flint, and some others, consider the occurrence of laryngeal disease as favorable, indicating an arrest of the processes in the lungs; while this may be true in exceptional cases, the general rule is decidedly the reverse; as stated by Marcet, the form which occurs late in phthisis, is "the last blow given to a constitution already shattered by pulmonary disease." This form occurs as a rule as a late complication of phthisis and oftener in the older subjects, in those who are broken down from other causes, or surrounded by bad hygienic conditions, insufficient food, air, or exercise. The latter, indeed, are predisposing causes generally, it does not appear that excessive use of the voice has any effect in predisposing to implication of the larynx.

The treatment should be local, general, and climatic. Direct applications with the laryngeal brush of astringent and stimulating solutions applied regularly at short intervals, with the direct spray, and inhalations of gases or medicated vapors, are serviceable. Strong caustic applications are to be avoided, and are only exceptionally of use; as a rule they are of doubtful utility, and produce more or less discomfort. While the later lesions cannot be cured, or the disease when then fully established arrested, in the earlier stages most decided results can often be obtained by the systematic use of topical measures, the disease arrested, if not cured, and at the least, years of health assured. A change of climate, especially to a higher altitude, is to be strongly recommended, and those hygienic measures which place the patient in the best condition for regaining health.

In other cases, very decided benefit is obtained by topical treatment, especially in relieving the cough and recurrent dyspnea, and thus giving great relief to the patient, carbolic acid, iodine, and the salts of iron are here of use topically. Any measures are to be resorted to that will relieve the cough, and, in some cases, by an effort not to cough, the patient can prevent some attacks, as the cough is only harmful. The application to the larynx, by brush, of opiate solutions, bromide of potash in glycerine, or the insufflation of morphine in sugar of milk, and the like, often give the most decided relief. Painting the epiglottis and upper portions of the larynx with olive oil, is useful, and often renders swallowing of food possible and easy, when otherwise attended with the greatest difficulty and pain. Iodine dissolved in olive oil, as recommended by Marcet, gr. x—xx to the ounce can be used with bene-

fit, even in the later stages, while externally for absorption, not counter irritation, it is decidedly useful, especially when there is enlargement of the tracheal glands. The free use of opiates in the later stages is to be regarded as a matter of course.

Of the fifteen cases, nine were males, six females, the greater number between twenty and thirty years of age; the oldest forty, youngest eighteen. There were ulcerations in the larynx and upon the epiglottis in ten cases, involving the vocal cords in five, and tubercular deposits in nine. In nearly all, the lungs gave evidence of tubercular deposits sooner or later, while in none of the fatal cases was there any favorable influence apparently exerted on the pulmonary disease by the laryngeal complication, but decidedly the reverse.

OBITUARIES.

DR. LORENZO MARCY, OF WOODSTOCK.

By Dr. H. W. Hough, Putnam.

Dr. Lorenzo Marcy was born in Woodstock, 1793. His early education was obtained at the district schools, and afterwards he was under the tuition of Ebenezer Stoddard, a young lawyer of Woodstock. He commenced the study of medicine with Dr. Thomas Morse, of his native town, in the spring of 1812, with whom he remained during the year. The next year he studied under the direction of Dr. Joseph Palmer, of Eastford. He attended a course of lectures at the Harvard Medical School, graduating in 1816. He commenced practice in South Killingly, where he remained eight years, and soon was a busy practitioner. He removed to his native town rather from sentiment than motives of interest, and there remained during the remainder of his active life.

Dr. Marcy's life was one of usefulness to his fellow men. In common with other members of the profession he performed a great amount of unrequited toil, and was always ready at every summons because there was a service needed which he could supply, and not because of pecuniary remuneration. Dr. Marcy was a man of strong common sense, well balanced judgment, and positive opinions. What he knew he knew thoroughly. He was an earnest student, interested in the literature of his profession, with which he compared the results of his own experience to good purpose. He was modest and agreeable in his manners, well acquainted with human nature, and kept himself well informed on current topics. His religious beliefs were not clearly stated, while the antagonisms facing him from within the church unfavorably affected his regard for it. Practically, he believed in honesty and self-control, and his upright life was an exemplification of his belief. He was at times subject to depression, with corresponding

reaction, without any change in outward circumstances. He was tenderly attached to his kindred and made their interests his constant care. Near the close of his life his religious beliefs seemed to change, and those who knew him best thought he had made his peace with God.

He died suddenly, peacefully, and without a struggle, while apparently in his usual health, and conversing cheerfully. His death occurred at Putnam, January 4th, 1875, in the eighty-second year of his age.

Dr. Marcy received an honorary degree from the Connecticut Medical Society, of which he was a member. He was somewhat active in political affairs, and twice represented the town in the Legislature.

DR. D. B. W. CAMP, OF NORTHFIELD.

By Dr. Camp, Bristol.

David Bushrod Washington Camp was born in Northfield, February 8th, 1804, and died in the place and house of his birth, September 1st, 1875, aged seventy-one years.

He studied with Dr. Alansou Abbe, of Litchfield, a surgeon of considerable reputation, and in the autumn of 1827 attended a course of lectures at the Medical Institution of Yale College, at the close of which he received a liceuse to practice. Naturally of a rather melancholic temperament, he decided, on his return home, not to commence the practice of medicine, but, yielding to the solicitations of friends, entered Dr. Abbe's office as assistant where he remained several months. He then located in Northfield, and soon gained the confidence and support of the community, aud the friendship and esteem of his professioual brethren, as a desirable and able counsellor. He read much, keeping well iuformed in the topics and events of the day. During the last few years of his life he was unable to practice his profcssion on account of ill health and the infirmitics of age. He leaves a widow, one daughter, and two sons, having lost his oldest son in the war of the rebellion.

DR. C. W. WEBB, OF WOODBURY.

By Dr. G. W. Miner, Morris.

Dr. Charles W. Webb was born in Pomfret, July 25th, 1809, of good old New England stock. In 1816 his father removed to Litchfield. He was a successful merchant and prominent citizen there. Dr. Webb's early life was passed in a town noted for eminent men, the excellence of its literary institutions, and for social culture. He prepared himself to enter college, but was prevented by ill health, and became a clerk in his father's store. He remained until 1829, when he commenced the study of medicine with Dr. Alanson Abbe, and continued under his direction for three years. During this time he attended two courses of lectures at the Albany Medical School, graduating January 31st, 1832.

He commenced practice in Woodbury, where he remained during the remainder of his life, with the exception of a short time spent in Troy, N. Y. Being a man of fine appearance, genial, and having great conversational powers, he soon acquired a large and widely extended practice. He excelled in diagnosis, and had marked tact and discrimination.

He married Miss Jeanette Moody, of Woodbury, April 29th, 1833, by whom he had four children, a son who was accidentally drowned while bathing, and three daughters, who are still living. Dr. Webb was postmaster from 1844 to 1849, represented the town in the legislature in 1862, and held many local offices of trust and honor. He was popular, beloved as a physician, and successful in his profession.

He was troubled with asthma during the last two years of his life, and died December 21st, 1875, aged sixty-seven. His funeral was attended the 24th, at the Episcopal church, where he had worshiped.

DR. E. M. DUNBAR, OF HARTFORD.

By Dr. C. W. Chamberlain, Hartford.

Dr. Edwin M. Dunbar was born in Boston, Mass., January, 1843; he graduated from the Springfield, Mass., High School in 1861, entered Chandler Scientific School, Dartmouth, the succeeding fall, a year in advance, and graduated in 1864. He studied medicine with Dr. Buck of Springfield, Mass, attended two courses of lectures at Harvard Medical School, graduating in the spring of 1868, commenced the practice of his profession in Hartford in the spring of the same year, where he remained until his last illness, with the exception of a six months' trip to Europe in 1873, under circumstance which brought him into personal relations with many of the most celebrated members of the profession in England and on the Continent. He died in New Haven, Jan. 21, 1876, and was buried in Springfield, Mass., on his thirty-fourth birth day.

Naturally of a studious analytical frame of mind, he was, from the circumstances of his life, thrown much into the companionship of books, and right royally did he use their fellowship, acquiring a broad and liberal culture in science, literature, and art. Of a companionable, sympathetic nature, he soon surrounded himself with a circle of congenial and appreciative friends, and a bright and fair career to all seeming, lay open before him. Bringing to the study of his profession natural abilities of no common order, enthusiastic in his life's work, his ready and earnest sympathy for the suffering, gained the warm love of those to whom his ministry brought relief, while his skill, knowledge, and ready tact won the respect of his professional associates.

He was of a firm, decided nature, strong in his friendships, and his habits and tastes decided, and to a keen and ready discrimination in judging the character and abilities of others was joined a ready courtesy in social intercourse.

His life was one marked by intervals of pain and suffering, the result of tuberculosis of the spine in early childhood, and the ultimate effects of which caused his death. In a paper which he prepared on this disease, he graphically describes it as "synouymous with life long suffering, severe lancinating pains like knife thrusts, and that horrid sensation of weariness which neither sleep nor rest removes, but which hangs like a cloud over one at all times, and when free from pain poisons all the pleasures of life that are left

him, robbing alike of energy and vitality." Yet few, unless of his most intimate friends, knew or would suspect that the bright, cheerful, and hopeful appearance so characteristic of the man, showed for its darker side, often recurring attacks of pain as severe as the human frame can endure, and the keener mental anguish that came from the consciousness that bodily weakness and early death must mock his fairest labor; nor was the latter revealed except by intimation and at rare intervals. The later months of his life were marked by the debility incident to his disease which, toward the last, precluded all labor and confined him for the most part to his room.

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GURDON BUCK,	New York City.

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The names of those who have been Presidents are in Capitals.

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*Over sixty years of age.

NEW HAVEN COUNTY.

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Mystic Bridge, E. Frank Coates.

* Over sixty years of age.

FAIRFIELD COUNTY.

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New Canaan, Samuel S. Noyes,* Lewis Richards,* Wm. G. Bronson.
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Ridgefield, O. S. Hickok, Wm. S. Todd.
Southport, Justus Sherwood.*
Stamford, N. D. Haight.*
North Stamford, Geo. W. Birch, W. H. Trowbridge.
Trumbull, George Dyer.*
Westport, George B. Bouton, F. Powers.
Huntington, Gould A. Shelton.
Sandy Hook, Wm. C. Wyle.
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* Over sixty years of age.

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THEODORE G. WRIGHT, M. D., of Plymouth, Clerk.

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WOODBURY, Harmon W. Shove, Frank P. Esterly.
Terryville, L. Tudor Platt.
Harwinton, Virgil Buell.

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East Hampton, Albert Field.
CHESTER, Sylvester W. Turner.
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Moodus, A. W. Bell.
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ELLINGTON, J. A. Warren.
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STAFFORD, Wm. N. Clark.*
West Stafford, Joshua Blodgett.*
Stafford Springs, C. B. Newton.
Vernon Depot, A. R. Goodrich.
Rockville, Stephen G. Risley, Francis L. Dickinson.

* Over sixty years of age.

APPENDIX.

REPORT OF COMMITTEE OF EXAMINATION.

The Committee of Examination met at the Medical College, Tuesday, June 29, 1875, at 11 A. M.

There were present on the part of the State Medical Society, P. A. Jewett, M.D., President; B. B. North, M.D., S. W. Turner, M.D., G. B. Farnam, M.D., and G. L. Platt, M.D.; and on the part of the College, Professors Silliman, Hubbard, White, Bacon, Smith, Sanford, and Lindsley.

This being the first trial of the method by written examinations, to which the candidates had already submitted, some discussion was had as to how the committee should proceed. After deliberation it was concluded that each professor report to the committee the result of the written examination of each candidate in his own department, after which each candidate should be required to read a portion of his thesis upon which he might be examined orally, and upon such other topics as the committee might think proper. This plan being adopted, the following gentlemen were recommended for the degree of M.D.:

Charles Lambert Blake. Thesis, "Acute Articular Rheumatism."

John Pierrepont Codington Foster, B.A. Thesis, "The Effects of Climate upon Phthisis."

William Howard. Thesis, "The Lungs and their Functions."

Elisha Munger. Thesis, "The Structure of the Body."

Isaac Reed Sanford. Thesis, "Some Relations of Chemistry to Medicine."

Bayard Thomas Smith. Thesis, "Hydrargyri Proto Chloridi."

On motion of Dr. Farnam, it was resolved:

That the Professors of the Yale Medical Faculty at future examinations of students be requested to adopt a uniform standard of marking, and that the character of each examination be reported by marks to the Committee of Examination, to aid them in determining the fitness of candidates for their degrees.

Voted, That G. L. Platt, M.D., be appointed to report the proceedings of this Board to the State Medical Society. Adjourned.

The Committee of Examination met pursuant to notice, February 17, 1876, at the Medical College.

There were present on the part of the Connecticut Medical Society P. A. Jewett, M.D., President; S. Turner, M.D., G. C. Platt, M.D., I. W. Lyon, M.D.; and on the part of Yale College, Profs. Silliman, Hubbard, White, Smith, Bacon, Sanford, and Lindsley.

The examinations were conducted upon the following plan, as arranged at the previous meeting of the Board; after the report upon the written examinations from each professor, the candidates were examined orally upon some portion of their theses, and were required to read from the examination papers their own answers to one question upon each topic, or all the answers upon any one topic as the committee chose in each case. Upon conclusion of the examination the following gentlemen were recommended for the degree of M.D.

Francis W. Drew. Thesis, "Suspended Animation from Syncope and Apnœa," and *Valedictory*.

George Robinson Henderson, M.A. Thesis, "Inflammation."

Samuel Henry Huntington. Thesis, "The Heart, its Anatomy and Physiology."

Laban W. Johnson. Thesis, "The Human Skull."

Mr. B. Somerville, after examination, was unanimously advised to pursue his studies another year, but his name was published in the list of graduates from Jefferson College, Philadelphia, Pa., within a month after.

Mr. E. R. Warner being a minor, requested that he might be admitted to examinations on condition that his degree be withheld until of age, if his examination proved satisfactory; his request was not granted.

Mr. Frank Gorham being ill at the time of the public examination, availed himself of the privilege allowed in such cases, and passed a satisfactory examination before the Faculty the first week in May, and will receive his diploma June, 1876.

The public exercises were held in the evening. The degrees were conferred by President Porter, and the valedictory address delivered by Mr. Drew. The annual address to the graduates was delivered by Dr. H. P. Stearns of Hartford.

G. L. PLATT, M.D.,
Chairman.

Order of Business at the Annual Meeting of the President and Fellows.

Organization.

Presentation of certificates to the Secretary, who, with two Fellows appointed by the President, shall examine the same, and the Secretary shall report the names of those approved, together with the names of the Officers present, and Delegates from corresponding Societies.

Business Committee, appointed by the President.

Unfinished business of previous year disposed of.

Committee on Nominations, appointed by county delegates.

Reception and reference, without debate, of communications, resolves, &c., from the several counties and members of the Convention.

Committee to nominate one or more Essayists for the next year, which Committee shall report at the Annual Convention.

Reports of Committee appointed on County Communications, &c.

Treasurer's Report.

Committee to audit the Treasurer's report.

Report of the Nominating Committee.

Election of Officers.

Report of Standing Committees.

Reports of Committees in the order in which business was brought forward in the meeting.

Miscellaneous business. Adjournment.

Order of Business in Annual Convention.

Organization.

List of New Members read by the Secretary.

The President's Address.

Written Report, Essays, Reports of Delegates to and reception of Delegates from other Societies, &c., in the order arranged by Business Committee.

Any propositions or suggestions, conducive to the welfare of the Society, or to the general interests of Medicine, may be brought forward by any member. The Society shall decide by vote whether to engage in the consideration of the same.

It will be in order at any time, if questions of interest are suggested by the debates in Convention, to appoint a special committee on the same, to report at the next Convention.

Communications offered by persons not members of the Society shall be received by a major vote of the Society.

Report of Committee to nominate Essayists for ensuing year.

Adjournment to dinner.

The Order of Business may be suspended by a vote of two-thirds of those present and voting.

TO CLERKS OF COUNTY ASSOCIATIONS.

It will be seen by reference to the Proceedings that *each County Association* is expected to appoint THREE CENSORS, whose duty it is to examine all young men who wish to commence the study of medicine, and give certificates to those who possess the proper preliminary qualifications.

It is requested that particular attention be paid to this subject, at the meetings of the County Associations, next year, especially in those counties that have neglected to appoint Censors.

In making their annual reports, County Clerks are requested to state:—

1st. Names of their officers.

2d. Names of Fellows elected.

3d. Name of County Student (if any) elected.

4th. Titles of papers recommended for publication, with the names of their authors.

5th. See that such papers are transmitted to the Secretary of the State Society at least one week before the annual meeting.

6th. Send list of all members elected during the year, with residence, place of graduation, and date of diploma.

7th. Names of all members who have died during the year, with place and date of birth, place and date of graduation in medicine, where they practiced and how long in each locality, date and cause of death.

8th. Send a complete list of all members of the County Association to the Secretary, with name of President and Clerk of County Association.

9th. Send a duplicate list to the Treasurer, with all particulars noted in By Laws, Chap. IV, Sec. 10.

10th. Send to the Secretary the names of all in arrears for taxes for more than the current year. Printed lists of members will be sent to the Clerks which they can correct and return to the Secretary.

EDITORIAL NOTICES.

The Connecticut Medical Society does not hold itself responsible for the opinions that may be contained in any article unless such article has been endorsed by a special vote.

The Committee of Publication would express their thanks for the uniform courtesy and consideration which the various writers have manifested towards them. They would emphasize the importance of care in the preparation of papers intended for publication, and specially request that, as far as possible all papers may be ready for the Committee of next year at the close of the Convention.

We have noticed with pleasure the evidence of increased interest in the Society, and of appreciation of its value as manifested in the care, labor, and research exhibited in the preparation of the various papers, and have been guided in selection mainly by the consideration of their practical nature. The reports from the County Associations are a very interesting feature, and we see how such work is appreciated by the adoption of the plan in other Societies, that of Massachusetts this year receiving similar reports for the first time.

Some changes have been made in the typographical arrangement which it is hoped may be not unacceptable. The plan of arrangement, as will be seen, places the transactions of the Society first, followed by reports of its working committees, after which are found the addresses, essays, &c., in due order. Proof sheets have been sent to all who have requested them, and the corrections inserted; it is suggested that when proofs are desired the request should, in all cases accompany the paper,

The Committee feel under great obligation to the publishers for the interest they have shown in superintending the work in its passage through the press, and would here express their grateful acknowledgments. The illustrations of cases are of unusual interest, and all are of permanent value, while the expense does not fall wholly upon the Society.

The proceedings are sent to all members *not in arrears for taxes*, to Honorary Members, Delegates from other Societies, and such Editors of Medical Journals as may desire to receive them. Any who are entitled to receive them, and do not, are requested to notify the Secretary, giving name and Post-Office address distinctly.

On behalf of the Committee of Publication,

C. W. CHAMBERLAIN, M.D.,
Secretary of Conn. Medical Society.

HARTFORD.

PROCEEDINGS

OF THE

CONNECTICUT MEDICAL SOCIETY:

EIGHTY-SIXTH ANNUAL CONVENTION,

1877.

PUBLISHED BY THE SOCIETY:
C. W. CHAMBERLAIN, M. D., Secretary,
86 TRUMBULL STREET, HARTFORD.
THE CASE, LOCKWOOD & BRAINARD CO., PRINTERS,
HARTFORD, CONN.

OFFICERS OF THE SOCIETY.

1877–1878.

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ROBERT HUBBARD, M. D., BRIDGEPORT.

VICE-PRESIDENT.

CHARLES M. CARLETON, M. D., NORWICH.

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F. D. EDGERTON, M. D.

SECRETARY.

C. W. CHAMBERLAIN, M. D.

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W. A. M. WAINWRIGHT, M. D. H. W. BUEL, M. D.
ASHBEL WOODWARD, M. D.

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On Examination.

ROBERT HUBBARD, M. D., *ex-officio.*
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H. E. GATES, M. D.
D. A. CLEAVLAND, M. D.
G. H. PRESTON, M. D.

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B. H. CATLIN, M. D. C. W. NEWTON, M. D.
WM. DEMING, M. D.

Committee to Nominate Physician to the Retreat.

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Committee of Publication.

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F. D. EDGERTON, M. D., }
G. W. RUSSELL, M. D.

Committee of Arrangements.

C. A. LINDSLEY, M. D., *Anniversary Chairman.*
F. L. DIBBLE, M. D.
A. E. WINCHELL, M. D.

Dissertator.

A. M. SHEW, M. D.

Alternate.

WALTER R. BARTLETT, M. D.

CONTENTS.

OBITUARIES.

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

The next annual Convention will be held in New Haven the 4th Wednesday in May, 1878, and remain in session during Thursday.

PROCEEDINGS

CONNECTICUT MEDICAL SOCIETY—EIGHTY-SIXTH ANNUAL MEETING.

The President and Fellows of the Connecticut Medical Society met in the Representatives Chamber, State House, Hartford, on the 23d of May, at 3 o'clock, P. M.

The President, Dr. A. W. Barrows, of Hartford, called the meeting to order, and briefly addressed the delegates, as follows:

Gentlemen of the Convention:

In accordance with a By-law of the Society, it becomes my duty at this time to present for your consideration such matters as I think should properly come before you.

First, as regards unfinished business. There is only one item of this kind of which I am cognizant, which is this: a resolution was proposed at the last annual meeting, by Dr. E. K. Hunt, as follows:

"*Resolved*, That the By-laws be so altered as to make the Treasurer, *ex-officio*, a member of the Publishing Committee."

This resolution will come before you, for action, in the regular course of business.

Second, I desire to present for your careful consideration a matter which deeply interests not only the physician, but the druggist and the community as well. I refer to the not very unfrequent mistakes which are made in prescribing and dispensing medicines—mistakes which often occasion much suffering, and sometimes the loss of life. There is too much reason for the pretty general uneasiness and fear expressed on the part of the people in regard to this question. Furthermore, these mistakes bring discredit to either the physician or druggist, and sometimes to both. It seems very desirable that some measures should be adopted whereby a better understanding might exist between the prescriber and the dispenser of medicine. I trust you will be able to devise some plan calculated to accomplish so important an object, and thus prevent the recurrence of these sad evils.

A question has arisen in regard to the revision of the U. S. Parmacopœia. This work is copy righted, and under control of the National Convention for revising the Pharmacopœia, and composed of delegates

from various State Societies, Medical Colleges, and Pharmaceutical Associations, but in affiliation with neither the American Medical Association or Pharmaceutical Society. The proposition is made that the control of this work be assumed by the American Medical Association, in conjunction with the Pharmaceutical Society. The ultimate result aimed at is to secure an authoritative national standard, with uniformity in weights, measures, and assayed strength of preparations.

Drs. C. W. Chamberlain and F. D. Edgerton were appointed a Committee on Credentials, and presented the following list of Fellows verified by examination of the returns from the clerks of the various County Associations.

LIST OF FELLOWS—Ex-Officio.

President.

A. W. Barrows, M. D.

Vice-President.

*Robert Hubbard, M. D.

Vice-Presidents, Ex-Officio.

James C. Jackson, M. D.
B. H. Catlin, M. D.
*Seth Smith, M. D.
*E. P. Bennett, M. D.
Wm. A. Lewis, M. D.
Wm. Deming, M. D.
*Elisha B. Nye, M. D.
*Maurice B. Bennett, M. D.

Treasurer.

F. D. Edgerton, M. D.

Secretary.

C. W. Chamberlain, M. D.

Committee on Matters of Professional Interest in the State.

C. A. Lindsley, M. D.
W. A. M. Wainwright, M. D.
*H. W. Buell, M. D.

---

* Absent.

FELLOWS ELECTED IN 1877.

Hartford County.

S. W. Rockwell, M. D.
G. R. Shepherd, M. D.
J. O'Flaherty, M. D.
Jas. Campbell, M. D.
R. E. Ensign, M. D.

New Haven County.

S. H. Bronson, M. D.
B. F. Harrison, M. D.
John Nicoll, M. D.
*S. D. Gilbert, M. D.
C. H. Gaylord, M. D.

New London County.

*Samuel Johnson, M. D.
C. M. Carleton, M. D.
*S. L. Sprague, M. D.
Ashbel Woodward, M. D.
*F. N. Braman, M. D.

Fairfield County.

Geo. B. Bouton, M. D.
*Jas. E. Barbour, M. D.
G. F. Lewis, M. D.
*A. E. Emery, M. D.
*W. A. Lockwood, M. D.

Windham County.

Wm. A. Lewis, M. D.
E. H. Davis, M. D.
*E. A. Hill, M. D.
*Lewis Williams, M. D.
*Elijah Baldwin, M. D.

Litchfield County.

W. W. Welch, M. D.
H. M. Knight, M. D.
*J. W. Bidwell, M. D.
H. E. Gates, M. D.
W S. Munger, M. D.

Middlesex County.

Geo. W. Burke, M. D.
J. W. Alsop, Jr., M. D.
E. Bidwell, M. D.

Tolland County.

*Maurice B. Bennett, M. D.
G. H. Preston, M. D.
J. LaPierre, M. D.

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* Absent.

Delegates from Other Societies.

Maine Medical Society—N. A. Hersom.

New Hampshire Medical Society—J. H. Blodgett.

The President then appointed the following committees :

On Unfinished Business—Drs. G. H. Preston, W. A. Lockwood, J. W. Bidwell.

On County Resolves—Drs. J. Nicoll, W. W. Welch, G. R. Shepherd.

On Gratuitous Students—S. W. Rockwell, B. F. Harrison, Wm. A. Lewis.

On Business—Drs. C. A. Lindsley, W. A. M. Wainwright, C. W. Chamberlain.

On Honorary Degrees and Membership—Drs. Lewis Williams, H. M. Knight, C. M. Carleton.

To Nominate Essayists—Drs. S. H. Bronson, E. Bidwell, C. A. Lindsley.

Auditing Committee—Drs. Geo. W. Burke, and J. O'Flaherty.

The Committee on Unfinished Business reported favorably on the proposed amendment to the By-laws making the Treasurer *ex-officio* a member of the Committee of Publication, and that no other business had been brought before them. The report was accepted, and the committee discharged. The question was then taken on the amendment, and receiving the requisite two-thirds vote, it was declared adopted.

On motion of Dr. Chamberlain, it was

Voted, That so much of the president's address as relates to prescribing and dispensing medicines, and the revision of the pharmacopœia be referred to a committee, to be appointed by the chair; the members being empowered to act as delegates to the Pharmaceutical Society of the State. This committee shall report to the next annual Convention.

Dr. Carleton offered the following:

Resolved, That we as physicians will not allow our prescriptions to be dispensed by any druggist, who shall himself prescribe for any disease, or allow any clerk or assistant in his employ to prescribe.

Dr. Chamberlain offered as an amendment, that no prescription be repeated by the druggist that calls for Narcotic, Emetic, or Emmenagogue drugs, unless by the physician's order, and remarked that this should be required by law, but the unsatisfactory

manner in which such subjects are treated by our legislatures leaves us little to hope for except what we can accomplish by concerted action. There should also be some rule requiring every prescription calling for unusual doses of powerful remedies, to be specially designated in some uniform way, or by some signal written upon the prescription, which should be understood by the druggist to mean that the physician had carefully read over the prescription, and it was as he desired it dispensed. If the mistake were in the prescription the blame would rest where it belonged. Often, in emergencies large doses are required, and if the druggist be obliged to verify the prescription the delay might prove fatal, and if inquiries are made of the purchaser needless alarm and suspicion caused.

Dr. Lindsley thought that but little could be accomplished by hasty action or by the implied threat; that it would be difficult to secure uniform action on the part of either physician or druggist. He spoke in high terms of the Pharmaceutical Association of this State as composed of honorable men, and soon to occupy the same relation to the druggist that this Society does to the physician, and that by conference with them some understanding could be arrived at, beneficial to both parties.

Dr. Wainwright said that many of the maladies treated by counter prescribing were of a very trifling nature and amongst the poorer class, who could not afford to pay for both advice and medicine; that the miscellaneous business done by druggists, sale of fancy articles, cigars, soda, patent medicines, etc., were a necessary part of the business according to their statements, and that however objectionable the sale of patent medicines and counter prescribing might be, they were unpreventable.

Dr. Carleton said that his resolution was not intended to apply to the dispensing of simple remedies but the regular treatment of diseases, especially the venereal; and the offering of unasked advice. He stated that by sending our prescriptions where patent medicines were displayed and recommended we gave them a *quasi* endorsement, and if hopeless that the sale of patent medicines and counter prescribing would ultimately be separated from the business of a respectable pharmacy, he should dispense his own remedies. Counter prescribing has been fully suspended in Lynn, Mass., and other cities, and the matter was in a fair way for satisfactory settlement in Norwich, Conn.

Dr. Lindsley thought that the subject should be first acted upon

by the local societies, which could accomplish more definite results. He proposed that the subject be referred to the Committee on the Relations between Physicians and Druggists, who report at the next convention, and the following amendment :

Resolved, That any Druggist who shall himself prescribe for any disease, or allow any clerk or assistant in his employ to prescribe, thereby violates the proper and just relation that should exist between the Druggist and Physician.

The motion, thus amended, was passed.

The President appointed on this committee, Drs. Wainwright, G. W. Burke, S. H. Bronson, M. C. White, C. W. Chamberlain.

On motion of Dr. Wilcox, a committee was also appointed to report to this Convention, on the revision of the Pharmacopœia as follows : Drs. C. A. Lindsley, A. Woodward, B. H. Catlin.

A short recess was then taken to allow the Fellows from each County Association to elect one of their number as a member of the Nominating Committee. The following names were reported, and read by the Secretary :

S. W. Rockwell, M. D., Hartford County.
John Nicoll, M. D., New Haven County.
Ashbel Woodward, M. D., New London County.
G. F. Lewis, M. D., Fairfield County.
William A. Lewis, M. D., Windham County.
H. M. Knight, M. D., Litchfield County.
George W. Burke, M. D., Middlesex County.
G. H. Preston, M. D., Tolland County.

The Committee on County Resolves reported that a communication from the Arkansas State Medical Society had been received, relating to the formation of a new society, by members who had withdrawn from the old, from some alleged grievances ; also a proposed amendment giving Middlesex and Tolland Counties five Fellows. In regard to the trouble in the Arkansas Society, your committee report that they deem no action advisable on the part of this Society.

Dr. Harrison moved to amend by adding, that while we do not understand enough of the merits of this case to recommend any definite action, we heartily condemn any action tending to weaken the obligations of professional unity. The report, as amended, was accepted.

The following resolution was reported:

Resolved, That Sect. I, Chap. IV, of the By-laws of this Society, be so amended as to read, "In each County five, except in the County of Tolland, which shall have three Fellows."

Dr. Wainwright objected to the report, that if there was to be any change, and the number of Fellows was based on representation, the whole subject should be revised, as two counties had more members than all the other six.

Dr. Chamberlain replied, that the number from each county to be elected, was limited to five by the charter.

Dr. Edgerton explained the resolution, stating that there were more tax-paying members in Middlesex County than in other counties that had a larger representation, and as the question must lie over until another year, moved that the report be accepted, and the committee discharged, which motion was carried.

The Treasurer's report was received, and referred to the Auditing Committee, by whom it was examined and found correct, and it was approved by the Society.

May, 1876, Balance in the Treasury,	$227.48
May, 1877, Received during the year,	421.75
	$649.23
Expended during the year,	441.27
Balance,	$207.96

The report of the Committee on Examination was presented by Dr. I. W. Lyon, and referred to Committee of Publication. (See Appendix.)

It was voted, that six hundred copies of Proceedings be printed this year; also that the annual tax be two dollars, payable June 1st, 1877.

The Nominating Committee made their report, and officers were elected as follows:

President—Robert Hubbard, M. D., of Bridgeport.
Vice-President—Charles M. Carleton, M. D., of Norwich.
Treasurer—F. D. Edgerton, M. D., of Middletown.
Secretary—C. W. Chamberlain, M. D., of Hartford.

Committee on Matters of Professional Interest in the State.

W. A. M. Wainwright, M. D., H. W. Buel, M. D., Ashbel Woodward, M. D.

Committee on Examination.

D. A. Cleavland, M. D., G. H. Preston, M. D.

Committee to Nominate Professors to Yale College.

C. W. Newton, M. D., Wm. Deming, M. D.

Committee to Nominate the Physician to the Retreat.

A. B. Haile, M. D., D. H. Nash, M. D.

Committee of Publication.

C. W. Chamberlain, M. D., *ex-officio*, F. D. Edgerton, M. D., *ex-officio*, G. W. Russell, M. D.

Committee of Arrangements.

C. A. Lindsley, M. D., Anniversary Chairman, F. L. Dibble, M. D., A. E. Winchell, M. D.

Dissertator.

A. M. Shew, M. D.

Alternate.

Walter R. Bartlett, M. D.

Delegates to American Medical Association.

C. A. Lindsley, M. D., S. Hutchins, M. D., William Scott, M. D., F. W. Alsop, M. D., Geo. L. Porter, M. D., S. H. Bronson, M. D.

Delegates to Maine Medical Society.

Elijah Baldwin, M. D., Rufus Baker, M. D.

Delegates to New Hampshire Medical Society.

J. H. Simmons, M. D., Wm. H. Richardson, M. D.

Delegates to Vermont Medical Society.

W. W. Welch, M. D., J. A. Warren, M. D.

Delegates to Massachusetts Medical Society.

C. W. Chamberlain, M. D., L. J. Sanford, M. D.

Delegates to Rhode Island Medical Society.

S. Hutchins, M. D., T. Morton Hills, M. D.

Delegates to New York Medical Society.

G. W. Burke, M. D., M. C. White, M. D., R. E. Ensign, M. D., H. P. Stearns, M. D., G. F. Lewis, M. D.

Delegates to New Jersey Medical Society.

T. S. Hanchett, M. D., W. A. Lockwood, M. D.

Delegates to Pennsylvania Medical Society.

B. H. Catlin, M. D., N. E. Wordin, M. D., Geo. B. Hawley, M. D.

Dr. H. M. Knight offered the following:

Resolved, That the Secretary, when definitely informed that the Delegates to the American Medical Association or any State Society cannot attend, he may appoint substitutes.

It was also *voted* to refer the motion to the next Convention as a by-law of the Society.

The Committee on State Board of Health reported as follows:

To the President and Fellows of the Connecticut Medical Society:

Your Committee can report but little progress in the discharge of the important duties assigned them. Acting in concert with a similar committee appointed by the American Medical Association, a bill embracing the provisions which had been found most efficient in similar organizations, was prepared and submitted to the legislative committee to which the matter was referred, and an unanimously favorable report secured. An appropriation of fifteen hundred dollars was asked for to defray working expenses.

It was reserved for the speaker of the House of Representatives to discover and announce to the world, as principles of government, that it is *not* the province of the State to take measures to protect health or prevent disease, and that if any body of men possessed knowledge, training, and skill which fitted them alone to perform any services, however beneficial to the State, it was impossible for the State to avail itself of these services, as thereby an unfair discrimination would be made against the ignorant and illiterate. His remarks were a fitting prelude to the debate that followed, though the speakers were by no means unanimous in their opposition.

Whether the proposed measures were the best to accomplish the needed reform in the sanitary regulations of the State, was a fair subject

for discussion; but a measure endorsed and urged by the most intelligent and thoughtful men of all professions in the country, demanded respectful and thoughtful consideration to say the least. The committee of the Texas Medical Society, in lamenting the failure of a similar measure there, attributed the result to the lack of a general educational system and the resulting want of intelligence.

There may be reason to doubt whether we are really growing so very much wiser from a small amount of knowledge widely distributed. One certain result has been to engender a spirit of self-sufficiency that is an obstacle to all real progress. Never have we had to contend with greater misconceptions, or against more narrow, specious, or one-sided prejudices. The permanent interests and success of rational medicine are inseparably connected with public prosperity. The wants of the community require that full scope should be given to medicine to accomplish its highest mission, the prevention of suffering and the prolonging of the period of human life. These ends can never be accomplished until the public consent to be guided by skilled judgment in all matters relating to public health. Sooner or later the time must come when the mission of the true physician will be generally recognized, not as a dispenser of remedies alone, but as a teacher of the science of life, of health, both in body and mind.

E. K. HUNT,
C. A. LINDSLEY,
C. W. CHAMBERLAIN, } *Committee.*

Dr. Catlin said, that as a member of the Committee of the American Medical Association, he had done what lay in his power to further the plan to establish a State Board. He expected his Committee would be continued, and hoped that one from this Society would be appointed to co-operate. Sixteen States had now such Boards; four, since our last Convention, had established them, including Colorado, and it could not be possible that Connecticut, the pioneer in so many humanitarian enterprises, could long be content to remain in the rear.

Dr. Lindsley spoke strongly in favor of continued effort, stating that no body of intelligent men could long remain obtuse to the benefits involved in such a plan, or need much urging to establish it. He moved that a committee be appointed.

The President appointed as a Committee on a State Board of Health, to act in concert with a similar committee from the American Medical Association: Drs. C. A. Lindsley, C. W. Chamberlain, H. M. Knight, J. C. Jackson, Lewis Williams.

The Committee on Honorary Membership and Degrees, reported that no names had been presented to them.

The Business Committee reported the following by-law for action next year.

"All Ex-Presidents of the Connecticut Medical Society shall be Permanent Fellows."

On motion of Dr. Carleton, the Secretary was authorized to purchase a seal for the Society, with appropriate motto and device, to be selected by him.

The Committee on Gratuitous Students reported as follows:

Max Mailhouse,

E. E. Gaylord.

The report was accepted.

On motion, the Annual Meeting of the President and Fellows was adjourned, to meet at New Haven the fourth Tuesday in May, at 3 P. M., 1878.

Attest:

C. W. CHAMBERLAIN, M. D.,

Secretary.

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held in the Representatives' Chamber, State House, Hartford, May 24, 1877, Dr. A. W. Barrows of Hartford, in the President's chair, Dr. C. W. Chamberlain at the Secretary's desk. The Vice-Presidents were represented by Drs. J. C. Jackson, B. H. Catlin, William Deming.

The meeting was called to order at 9.30 A. M. The list of officers was read by the Secretary, and the annual report presented, as follows:

New members admitted through the various County Associations:

W. T. Bacon, M. D., Univ. N. Y., 1870, Hartford.

W. W. Knight, M. D., Univ. N. Y., 1876, Hartford.

M. J. Coholan, M. D., Univ. N. Y., 1865, New Britain.

W. L. Barber, M. D., Bellevue, 1872, Tariffville.

A. W. Tracy, M. D., McGill College, Montreal, '73, Meriden.

Edward A. Wood, M. D., Harvard, 1869, No. Branford.

Wm. H. Carmalt, M. D., College Physicians and Surgeons, N. Y., 1861, New Haven.

Michael A. Cremin, M. D., College Physicians and Surgeons N. Y., 1874, New Haven.
Thomas P. Gibbons, M. D., Jefferson, N. Y., 1857, New Haven.
Thomas H. Russell, M. D., Yale, 1875, New Haven.
James J. S. Doherty, M. D., Univ. N. Y., 1874, New Haven.
Wm. M. Burehard, M. D., Georgetown, 1866, Montville.
Elisha Munger, M. D., Yale, 1875, East Lyme.
E. T. Ward, M. D., Yale, 1865, Bridgeport.
F. P. Clarke, M. D., College Physicians and Surgeons, N. Y., 1876, Danbury.
J. C. Kendall, M. D., College Physicians and Surgeons, N. Y., 1875, Norwalk.
J. C. Lathrop, M. D., Bellevue, 1875, No. Grosvenordale.
Thomas Graves, M. D., Harvard, 1870, West Killingly.
B. S. Thompson, M. D., Bellevue, 1867, Salisbury.
C. W. Camp, M. D., Univ. New York, 1874, Canaan.
A. G. Heaney, M. D., Long Island Hos. Coll., 1876, Thomaston.
F. W. Brown, M. D., Univ. N. Y., 1877, Woodbury.
J. H. Trent, M. D., Long Island Hos. College, 1876, Cromwell.
Wm. L. Kelsey, M. D., Jefferson, 1876, Willington.

Two Honorary Members of the Society have died during the past year—Dr. Walter Channing of Boston, Mass., and Dr. Gurdon Buck of New York, men long honorably identified with the progress of medieal seienee in this eountry. Eight members of this Soeiety have died sinee the last Convention, for the most part men far advanced in years, ineluding one venerable Ex-President, Dr. Wm. H. Cogswell of Plainfield. Three members have removed from the State, and one left the profession—leaving a clear gain of eleven members. There have been rather an unusual number of ehanges of location, which will be found by consulting the lists.

There was contributed by three members of the Society in Hartford, forty-five dollars, and sixteen dollars received from the outer page of the cover for advertisements, which was expended for illustration.

Exchanges have been received from twenty-six medical organizations, and our Transactions sent in return.

A telegram was received from the President-elect, Dr. R. Hubbard, regretting his inability to be present, as he was confined to his bed by a severe attack of intermittent fever.

The Annual Address was presented by the President, Dr. A. W. Barrows, on Malarial Fever in New England. The address was

listened to with a great deal of interest, as the disease has lately reappeared here. A very able and exhaustive discussion of the theme was presented.

The thanks of the Convention were tendered to Dr. Barrows for his very interesting address, and a copy requested for publication.

The Chairman of the Committee on Matters of Professional Interest, Dr. C. A. Lindsley, presented a very valuable report on the sanitary condition of the State, and the relations between Typhoid and Malarial Fevers. The report was accepted, and a copy requested for publication.

Dr. Chamberlain moved that a vote of thanks be tendered Dr. Lindsley for the very satisfactory manner in which he had performed his duties on this committee, and the valuable contributions to the medical history of the State comprised in his reports. That it is with sincere regret we learn that his duties will no longer allow him to perform the onerous labors incident to this position.

The President presented the delegates from other Medical Societies to the Convention with a brief address of welcome, Dr. J. P. Blodgett of New Hampshire, and Nathaniel Hersom of Maine, the latter addressed the Convention and presented the greetings of the Medical Society of Maine. The Secretary read a letter from Dr. Bradford of Homer, N. Y., appointed a delegate from New York, regretting his inability to be present.

The Committee on Revision of the Pharmacopœia presented the following report:

The committee to whom was referred the proposed change in the authorization of the United States Pharmacopœia, respectfully report:

They find in the resolutions submitted at the last meeting of the American Medical Association, which were designed to lead to the said change, that it is stated that a failure to oppose this movement by any society having authority, shall be construed to signify acquiescence in its object.

Your committee, fully impressed with the importance of the subject, and believing that it involves too deeply the most vital interests of the profession to justify any hasty or ill-considered action, and believing also that no members of this society have as yet given to the subject that thoughtful and thorough consideration which will enable them to lead us speedily to just and true conclusions; and there being no time at this meeting to enter into a full discussion of it, would recommend that the Connecticut Medical Society decline at the present time and with their present light, to express either their approval or disapproval

of the proposed change of authority, but prefers to entrust the disposal of this important question to the wisdom of the American Medical Association, whose superior opportunities, larger numbers, and greater concern in this subject will qualify them to protect the best interests of the profession.

Respectfully submitted,

C. A. LINDSLEY,
B. H. CATLIN,
ASHBEL WOODWARD, } *Committee.*

Dr. Storrs moved that the report be not accepted ; he explained the plan proposed, and thought the society was well enough informed to take definite action.

Dr. Russell advocated the acceptance of the report, and feared that the present movement would result in the formation of two pharmacopœias, a result which would lead to endless confusion. Moreover, he doubted the legality of the proposed action, as it seemed to interfere with vested rights.

Dr. Chamberlain said that there were already two dispensatories in the field, and that the old and reliable editors of both pharmacopœia and dispensatory were no longer available, and the works were likely to become mere commercial speculations. The dispensatory was no longer a commentary on the pharmacopœia, nor representative of the present state of pharmaceutical or therapeutical knowledge. The proposed plan, it was hoped, would eventuate in the establishment of a legal standard of weights, measures, and preparations.

Dr. Russell moved to amend the report as follows:

We also recommend that this Society express in the most emphatic terms that we should deplore any action which would result in the publication of two pharmacopœias, each of official authority.

The report as amended was accepted, and the committee discharged.

Dr. James Campbell read an essay on The Pathology of the Pneumogastric, giving a thorough review of the results of recent researches.

The thanks of the Convention were tendered Dr. Campbell, and the paper requested for publication.

The remainder of the session was occupied with voluntary communications.

Dr. Wm. Deming read a very thoughtful paper on Temperament and Age in the Development of Phthisis.

Dr. Storrs presented a valuable surgical paper on the Treatment of Vaginal Lacerations from Parturition.

Dr. May read a very interesting report on the Treatment of Puerperal Mania at the Institution at Middletown.

Dr. Chamberlain presented a communication on Spasmodic Stricture of the Œsophagus.

Dr. Wainwright related several surgical cases of interest.

The thanks of the Convention were tendered these gentlemen and the papers referred to the Publishing Committee.

The following papers were also thus referred, and read by title only ·

On Orthopædic Surgery, S. L. Sprague, M. D.

Biographical Sketches of the Early Members of the Middlesex County Medical Association, R. W. Mathewson, M. D.

The Cottage Plan for Treating Insanity, W. B. Halleck, M. D.

The Committee to nominate Essayists reported the following names:

Dr. L. S. Paddock,
Dr. S. H. Chapman,
Dr. G. P. Davis,
Dr. E. P. Swasey,
Dr. W. A. Lockwood,
Dr. C. M. Carleton.

The Committee of Arrangements announced dinner at 3 P. M.

Adjourned *sine die*.

C. W. CHAMBERLAIN, *Secretary*.

PRESIDENT'S ADDRESS.

ON MALARIAL FEVER IN NEW ENGLAND.

A. W. BARROWS, M. D., HARTFORD.

Gentlemen of the Connecticut Medical Society:

Another year has completed its course, and again we are permitted to come together for mutual congratulations and improvement. Occupying the position to which your too partial kindness has called me, allow me to express the hope, that these brief hours of respite from the engrossing cares and anxieties of our profession, in which we meet to exchange our views and to gain some added knowledge in the conflict with disease, may prove to us both profitable and pleasant.

In addressing you on this occasion, it is my purpose, during the short space allotted me, to call your attention to the history and progress of a disease which has, within a few years past, developed itself in many portions of our State: I propose to give a brief *Glance at the History, Origin, and Causes of the Malarial Fevers of New England.*

I do not forget that one of my honored predecessors, Dr. Henry Bronson, at the convention of our Society at New Haven in 1872, presented a most able and exhaustive paper on this subject,—one which, so far as the history and progress of these fevers in the vicinity of New Haven was concerned, left nothing unsaid; and while malarial fevers have advanced northward and eastward since that time, to such an extent as to justify the review of a wider region of territory, and a somewhat more extensive range of observations, I cannot hope to treat the subject so thoroughly as that eminent observer has done.

Let us first glance, briefly, at the historical facts, which we have been able to glean, in regard to the past prevalence of the disease. We shall find it necessary, I think, to confine our observations to a tract not extending more than one hundred and fifty or two hundred miles back from the coast of New England, for two reasons: first, that in the interior, except at the first clearing of the country, there was very little malarious disease; and second, that of that little, our records are so imperfect, and the probabilities of

local causes so strong, that we are not justified in spending any time over it. Were we to limit our investigations to our own State, we might add that no portion of it is one hundred or even eighty miles distant from the sea-coast, but we are not disposed to thus restrict our inquiries.

The evidence that intermittent fever prevailed at various points in New England in the seventeenth century, seems to be conclusive. Dr. Oliver Wendell Holmes, in his Boylston Prize Dissertation on Intermittent Fever, published in 1838, quotes from Josselyn (about 1671) a statement concerning the diseases of New England, in which "*Fever and Ague*" is twice specified.

Hubbard's history of New England, from which he also quotes, (completed in 1677 or 1678,) speaks of the first planting of New Haven, and mentions among its climatical diseases, commonly there called "*the seasoning*," "*an ague and fever* seizing upon men in the heat of summer, chiefly upon new-comers, therefore called by that name, but not sparing the more settled inhabitants, especially in case of intemperate drinking." Upon these southern coasts of New England, he adds, "it is not unusual, as in Virginia, there being sundry years when there is nothing considerable of it, nor ordinarily as violent and universal; yet at some times it falls very hard upon the inhabitants, not without strange varieties of the dispensations of Providence, for some years it hath been almost universal upon the plantations, yet little mortality; at other times it hath been very mortal in a plantation or two, when others, that have had as many sick, have scarcely made one grave; it hath been known also in some years that some one plantation hath been singled out and visited after a sore manner, when others have been healthy round about. . . . . This disease, wherever it comes, is attended with great prostration of spirits, and sometimes in the hot fit with strange stupefactions of the brain. Strengthening the body with cordials, and gentle conducticious aiding of nature, hath been found better than sudden and violent means by purgations or otherwise; and blood letting, though much used in Europe for fevers, especially in hot countries, is found deadly in this fever, even almost without escaping; the reason whereof is left to be inquired by those it may properly concern."

Those of you who had the pleasure of listening to, or of reading Dr. Bronson's paper, will not need to be told how, in this as in so many other instances, history repeats itself. I pray you to note, also, what is said of bleeding in these cases, and at a time when almost every physician was a disciple of Dr. Sangrado.

There is surely evidence of the existence, at that early period, of a typhous diathesis, and a low grade of action requiring a judicious use of stimulants and tonics, at a date much earlier than we have been accustomed to look for it. Dr. Holmes further quotes from Cotton Mather's "Magnalia," and especially from his biographical notices of Mr. John Sherman, minister of the church in Watertown, Mass., of the famous John Eliot, the apostle to the Indians, and of Uriah Oakes, some time President of Harvard College, such incidental notices of the disease as these: of Mr. Sherman "Being then at Sudbury, he was taken sick of an intermitting, but malignant *fever;* which yet abated, that he found opportunity to return unto his own home at Watertown. But this *fever*, the renewing upon him, it prevailed so far, that he soon expired his holy soul." Of John Eliot, "Laboring once under a *fever and ague*, a visitant asked him *How he did?* And he reply'd, *Very well, but anon I expect a Paroxysm,*" etc. Of his final sickness, Cotton Mather tells us that "He fell into some languishments, attended with fever, which in a few days brought him into the Pangs of Death." Of President Oakes, Mather says: "The church of Cambridge could now show this *Orient Jewell* for divers years, before the Almighty would have it made up *among his Jewells;* though the Troubles and sorrows of a *Quartan ague* often diverted him from his Public services; but the *College* in *Cambridge*, languishing under a somewhat worse than an *Ague*, by the want of a *President*, this accomplished man ministered unto that Place."

Dr. Bronson, while quoting the extract from Hubbard's History of New England at greater length than I have done, adds to it the testimony of Rev. John Davenport, the first minister of New Haven, both in regard to the prevalence of the disease in New Haven, and also at Norwalk and Fairfield; and there is very good reason for believing that the towns along the Sound, east of New Haven, including New London, were visited by it during the seventeenth century.

The regions of the Housatonic Valley, and a somewhat limited section of the Connecticut Valley, were subject to malarious diseases soon after their first settlement. In most of these towns the disease disappeared or occurred only at long intervals, during the eighteenth century. This was not the case, however, in New Haven, or in Norwalk, Stamford, Greenwich, and other towns of Fairfield county, and probably not in Lower Housatonic, nor in New London. In the map attached to Dr. Holmes' Boylston Prize

Dissertation, he designates Pomfret, Litchfield, New Milford, New Haven, and Greenwich, together with ten towns on the Housatonic and Connecticut Rivers in Massachusetts, six places in Eastern Massachusetts, two in Rhode Island, one in New Hampshire, and two in Maine, as places where intermittent fever was supposed to have originated previous to 1836. Certain circumstances are to be taken into the account in regard to some of these localities. The valley of the Housatonic, from its source to its mouth, has long level stretches, alternating with sudden and precipitous falls, and where it was deemed necessary to erect dams, either to utilize the water power, or to overflow some heavily-timbered lands, to kill the trees, the overflowed region being a part of the time not covered with water, laid bare to the rays of the summer sun, masses of decaying vegetable matter, which produced, or at least were coeval with, the presence of intermittent fevers. Dr. William Buell of Litchfield, a former president of this Society, in a communication to the Massachusetts Medical Society, dated June 6, 1835, and quoted by Dr. Holmes, gives many instances of this kind, but says that, at this time, the disease was disappearing through most of that region; that places where it formerly existed, as an endemic, were now free from it; that along the banks of the Bantam river in Litchfield, and especially near the site of a dam which had been erected for the purpose of killing the timber by inundation, there had been during the continuance of that dam, a general prevalence of intermittent, but after its removal, somewhere about 1730, the inhabitants had been perfectly free from the disease. He also stated that the disease still prevails, though only to a very slight extent, at Pittsfield, Massachusetts, New Milford, Connecticut, and probably some other points in the valley. Some six or eight years before the date of his letter, the erection of a dam across the Housatonic, near the dividing line between Massachusetts and Connecticut, had been followed by an increase of intermittent, and the dam had been removed, at the petition of the inhabitants of the vicinity, with the usual result.

The types of the disease had been generally tertian, not infrequently quotidian, rarely quartan.

In the last decade of the eighteenth century, according to the testimony of Dr. Buell, intermittent and remittent fevers, and dysentery, which he believed to be of malarial origin, as well as typhus and congestive fevers, prevailed at many points of the Housatonic Valley. Notwithstanding the positive assertion of Dr.

Nathan Smith, on page 50 of his surgical and medical memoirs, that "on the Connecticut River, from Northampton to its source, a distance of more than two hundred miles, from north to south, and on all its tributary streams on both sides, for a hundred miles in width, there has been no instance of any persons having contracted the intermitting fever, from the first settlement of the country to the present time; and yet the typhus fever has prevailed more or less in every township within that tract of country;" there is abundant evidence that intermittent and remittent fever had been endemic within forty years of the time in which he wrote (about 1824) in Northampton, Deerfield, Hatfield, and Greenfield, all on the Connecticut, as well as Adams on the west, the towns already specified on the Housatonic River, which are much less than one hundred miles west, and at Groton and Hopkinton, about fifty miles east of the river. It is surprising that these facts should have escaped the notice of so accurate an observer as Dr. Smith. It is nevertheless true, that so far as Connecticut was concerned, there were comparatively few cases of indigenous intermittent within its bounds, during the first half of the present century. In Fairfield County, especially in the southwestern and southern portions of it, there were a few cases, from year to year. From 1828 to 1832, according to the testimony of Chief Justice Butler, who was a medical practitioner in Norwalk at that time, there was an epidemic of intermittent fever in that part of the county west of the Housatonic River. More than one-half of the population of Norwalk suffered from it in 1830 and 1831, and in all of the towns along the Sound shore, in the southwest of the county, it was prevalent, the cases being most numerous in the valleys, but the hills not being exempt. In New Haven and its vicinity, there were occasional cases between 1800 and 1810; but from that time to 1850 there were very few cases reported. There were a few cases occurring in the vicinity of marshy lands, in Stonington and North Stonington, in 1837 or 1838, and in 1843 one or two in Mystic and Old Lyme.

The Stonington cases were indigenous, but there is some ground for doubt about the others. From 1850 to 1856, there were, according to Dr. Bronson, a considerable number of cases of intermittent fever, and other fevers marked by severe but irregular chills, in New Haven and its vicinity. From 1856 to 1864, the number of cases was smaller, but the idea of a change of diathesis, in which quinine proved an effectual remedy in cases which it had

formerly aggravated, gained credence in the minds of many of the physicians, as a result of their own observations. Prof. Charles Hooker was among the first to advance this idea. Dr. Bronson has described with so much minuteness of detail, and fidelity of observation, the progress of intermittent fever in New Haven and vicinity, from 1863 to 1872, and his valuable paper is so familiar to you all, that I need not repeat what he has so fully narrated. The exemption of Fairfield County was not of long duration. About 1853 the disease reappeared, confining itself mostly to a comparatively narrow belt, along the Sound shore from the State line to New Haven. In Norwalk, Fairfield, and Bridgeport, it was for some years quite severe, but lighter in other towns. It still occurs there, though for the most part sporadically.

East of New Haven, Fair Haven, East Haven, Branford, North Branford, and Guilford, as well as North Haven, Hamden, Cheshire, and Meriden, were all visited between 1866 and 1872, and in most of these the disease still prevails, though with diminished intensity. In Essex, the disease appeared in 1869, and in 1871 or 1872 had reached up the Connecticut Valley as far as Hartford. In regard to this section of the State, and the progress of the disease, since the completion of Dr. Bronson's paper, I have been able to glean a few facts, which I will now lay before you. I am satisfied that there have been sporadic cases of intermittent in several of the towns of Hartford and Middlesex Counties, and some of the northern towns in New Haven County, during most of the years since 1856 or 1857, the period when it was prevalent in the southern part of Fairfield and New Haven Counties; and there is strong evidence that some of these cases, which altogether were very few, originated here. Dr. Rufus Griswold, of Rocky Hill, in a letter addressed to me, gives the particulars of one such case, which occurred there in 1857. Dr. A. S. Warner, of Wethersfield, had several cases in 1864 and the following years. In Meriden, Dr. Catlin, though he had personally seen no marked case previous to 1870, had heard of one in the city in 1867. It is said that cases occurred in Middletown, Cromwell, and Portland, in 1869. But these isolated cases, like a few rain-drops before a shower, were only the precursors of an epidemic visitation of the disease, which commenced in 1871 or 1872. The first cases occurred in Hartford in the summer and autumn of 1872, mainly in Wethersfield avenue, near the southern boundary of the city, and indicated that it was working its way northward from Wethersfield, where,

as I have already said, it had been in some sort endemic for seven or eight years. There were, however, some local causes, which may have attracted it to this part of the city at that time. A large sewer main was laid, about a mile and a half in length, six feet in width, and from eight to twenty feet in depth, through the low grounds, parallel with and sixty or seventy rods west of Wethersfield avenue, and terminating in Folly Brook on the south. The whole region through which this sewer passes is underlaid by a dense red clay, almost as compact as the red sandstone upon which it rests. Within a few feet or rods of this sewer, through nearly its whole extent, a small, sluggish stream flowed, which received the sewage discharge from the houses and other buildings along its course, as well as the surface drainage from the rising lands and slopes adjacent. East of this avenue, about the same time, the Connecticut Valley Railroad Company were constructing their road through the meadows, and throwing up the alluvial soil (overflowed every year by the spring freshets) in high embankments. While the number of cases was not very large the first season, they were mostly confined to Wethersfield avenue and its immediate neighborhood; and it is worthy of remark, that they have continued to occur there every year since, and more severely the past season than previously, stimulated to activity, possibly, by the grading anew of the avenue, which involved an extensive upturning of the soil during the hot, dry weather. Since its first appearance, not less than three-fourths of all the dwellings on this part of the avenue have furnished cases of intermittent fever. This extensive upturning of the soil (both in 1871-2 and in 1876), much of it saturated with moisture, and containing vegetable and animal matters in various stages of decay, and simultaneous appearance of intermittent, must have been something more *than a mere coincidence*, since it has been so uniformly observed in New York and Brooklyn, as well as in suburban towns and cities in the vicinity of the metropolis, that the laying of large sewer and water mains, the grading of railroads, and even the extensive excavations for building purposes, is followed by the prevalence of intermittent, and that those who are engaged as laborers in these excavations are usually the first victims of the disease. But to return to Hartford: the disease prevailed in the summer of 1876, in the northeastern part of the city, near the Connecticut River, and in close proximity to a new railroad. The grounds here are subject to freshets, and much of the alluvial soil had been broken and upturned in the construction of the road.

In East Hartford, the disease appeared in 1872. In that and the next three years, there were sporadic cases in various parts of the town. In the summer of 1876, which will be long remembered for its intense heat and dryness, the mercury having risen to 90° or above, for twenty-nine or thirty successive days (June 20th to July 20th), and to 100° on four of those days, the disease took a new departure in East Hartford, becoming epidemic along the river banks both above and below the causeway. Within half a mile of the causeway and north of it, near the river, there are altogether 174 inhabitants; of these, 145 (84 per cent.) contracted the disease. South of the causeway, and between it and the mouth of the Hockanum river, along and near the banks of the Connecticut, are 194 inhabitants; of these, 116 (nearly 60 per cent.) were afflicted with ague.* There were very few cases in other parts of the town. The soil of these two tracts is alluvial, overflowed every year by the spring freshets; but this does not seem, heretofore, to have caused the disease. Another circumstance, however, may have something to do with it. The season being remarkably dry and hot, the river early in the season became low, and the shallow places were dry part of the time. On the eastern side of the river above the bridge, an island, containing twenty acres or more, has formed by the gradual washing away of the river banks, and the deposit of such animal and vegetable matters as have been arrested in drifting down the stream. This island is not usually above the surface of the river, except at a few small points; but last summer it was mostly bare, except at high tide, when the water, which rises about fifteen inches, would, for a few hours, cover the greater part of it. The rest of the time it presented its surface to the direct rays of the hot sun, and the westerly winds would carry the malarious effluvia directly to the districts which were so grievously affected. During the summer of 1876, intermittent prevailed to some extent in Windsor and East Windsor. I have no knowledge of its extending further north.

In New Britain, as in Hartford, it first attracted attention in 1872, and as in East Hartford, the cases were sporadic, and confined to no one part of the town. No local causes have been ascertained for these cases, unless the grading of streets and the opening of trenches for the laying of sewer and water mains, may

* I am indebted to Dr. Storrs of Hartford, for these statistics Also to Dr. Childs of East Hartford, for valuable information in regard to the prevalence of the disease in that town.

be considered such. In the summer of 1876, Dr. Comings informs me that it became epidemic in a farming district, where there was a pond, which, with the boggy and marshy ground around it, covered thirty acres or more. This pond became dry during the summer. Near it eighty persons were living at the time. The fever commenced in July, and during August and September, fifty-five of the number suffered from intermittent fever. A small mill-pond in another part of the town became dry, both in 1875 and 1876, and both years the two or three families living near were attacked with intermittent. In Hartford, East Hartford, and New Britain, the continued high temperature and absence of rain, seem to have been favorable conditions for the development of the disease. In some other localities, in this and adjacent counties, it is not so easy to determine whether local causes have had anything to do with its generation.

In Rocky Hill, where the first cases occurred in 1872, (except a single case in 1857,) and where, in a population of less than one thousand, there were forty or fifty cases in 1875, and as many in 1876, Dr. Griswold writes me that there have been absolutely no appreciable local causes. The Valley Railroad was built there in 1870–71, but there was no intermittent till 1872, too long a time after, he thinks, to permit the two to stand in the relation of cause and effect. Some ponds dried up, but they have done so for years, and no intermittent has followed; nay, in one region where three such ponds dried in the summer of 1876, and the decaying vegetable matter was exposed to the rays of the summer sun, there was literally no intermittent within one or two miles, while other localities, distant from such supposed sources of malaria, suffered severely from it. Dr. Griswold may have overlooked one source of malaria—the Connecticut River, which there, as well as above, overflows its banks, leaving an alluvial deposit which contains much vegetable and animal matter.

Dr. R. M. Griswold, who practiced for a time in Cromwell, a town adjoining Rocky Hill, writes that the Cromwell quarrymen, who have suffered severely from intermittent fever, are accustomed in the summer and early autumn, to congregate at evening on or near the banks of the river; and that persons who are exposed, even from having their windows opened in that direction, to the night breezes from the river, were almost invariably attacked by the disease. It would seem by the testimony of many physicians, that these exhalations from infected rivers and ponds, are capable

of rising to a considerable height; even in some cases, mentioned by Dr. Bronson, from one hundred to two hundred feet. It is certain that from July to October, persons descending the Potomac River on a steamer, and becoming exposed, without previous acclimatization, to the night air on that river, are exceedingly liable to suffer from chills and fever, and often from the more deadly congestive forms of the disease. During the day this influence is not experienced.

While there is some evidence that malarial diseases were observed in Middletown and Portland, as well as in other localities in the valley of the Connecticut, previous to 1872, the cases must have been very few.* In a letter addressed to me, from Dr. Rufus Baker, of Middletown, he states that "Intermittent fever first manifested itself in this vicinity in the summer of 1872, a few cases appearing in Newfield, a neighborhood a mile or two northwest of the city; at Fort Hill, in the vicinity of the Insane Asylum; and on the bank of the river in the lower part of Portland." He adds that, "Since 1872, intermittent fever continued to increase till the last summer (1876), when it seemed to be on the decline, or rather the cases seemed to be less severe and less frequent." He says, "I have found persons, living on the highest, as well as the lowest grounds, suffering with the disease. . I think, however, most frequent in low places and on the borders of streams." Dr. Baker further says, "Malaria has manifested itself in other forms than intermittent; it has seemed to impress a *paroxysmal type* on all diseases. From early spring till late autumn, this poison has manifested itself in every disorder that I have met. Diarrhea, dysentery, and particularly neuralgia, have seemed to depend on its influence. Almost every body, at some portion of the year, has seemed to be impressed by it. . As to causes, I know of none that have not heretofore existed, and yet I have never known an indigenous case of intermittent in this county previous to 1872."

I learn that it has prevailed for the past two years severely in the vicinity of Newfield, and has been most abundant there, where that region has been most extensively overflowed by the spring freshets. The subsoil there is a dense, clay, hard-pan, lying upon the red sandstone, and when the soil is saturated with moisture, it is retained a long time by the clay. It is not improbable that the

* Dr. J. C. Jarvis, of Hartford, informs me that several cases of intermittant fever occurred in Portland, in the vicinity of a marshy tract, in 1868, and in the following year the disease appeared in other parts of the town. These cases came under the care of the late Dr. Geo. O. Jarvis, of Portland.

severity of the disease in this locality may be largely due to the deposit of organic matter from the floods, and its retention by the impervious subsoil.

In Portland and in Glastonbury, where the disease has prevailed quite extensively, it first appeared along the borders of the Connecticut River, and gradually extended inland, following the course of the streams.

Dr. Hazen, of Haddam, writes me that quite a general epidemic of intermittent prevailed in that town the year after the completion of the railroad in 1871 or 1872. He says, "It prevailed mostly along and near the line of the road, and hardly a case occurred to me that was far away from the railroad." During the past summer and early autumn, intermittent fever prevailed in the vicinity of Goodspeed's Station; that of twenty families residing there, nearly every one of them was visited by the disease. On the other side of the river, near Goodspeed's Landing, and also at East Haddam Landing, two villages about three-fourths of a mile apart, and opposite Goodspeed's Station, a similar development of the fever took place. The Doctor thinks this epidemic was caused by the drying up of several artificial ponds in these immediate neighborhoods, during the protracted hot and dry weather.

At Meriden, Dr. Catlin has attentively observed the disease since 1870. It has pervaded all parts of the city, and the Doctor has no hesitation in assigning as its *immediate cause* (though admitting the probability of a more remote one), the grading of the streets and the draining and raising of dams of some mill-ponds, which exposed large quantities of decayed vegetable matter to the direct rays of the summer sun. Similar results followed, you will recollect, in many instances, from the same causes, in the vicinity of New Haven, as described by Dr. Bronson.

Dr. Risley, of Rockville, in a letter to me, and from which I quote, says, "There is in Ellington and the northern border of Vernon, a tract of some five square miles, known familiarly as the 'Marsh,'—a very appropriate name. This land is so low that it cannot be successfully drained; still, in very long dry seasons, the peat bogs in the central portions become thoroughly dried. Contiguous to this swamp is an extensive area of bottom land composed of a rich alluvial soil, and for its productiveness is much sought after for agricultural purposes. The farmers have devoted much attention to reclaiming lands. Consequently, after clearing and draining these swampy lands as far as practicable, much soil has been turned up by the plough every year, and thus liberating

gases that have accumulated for ages by the decomposition of vegetable substances. From this combination of circumstances, one could easily imagine that this was a malarious district." But the Doctor adds, "We rarely see well-marked intermittent fever here. There is a great deal of bilious trouble, so that in any form of disease we expect a combination of bilious and gastric derangements. The prevailing disease, which almost every person has to pass through, is typhoid fever, or in many cases *typhoid malaria*, and much of this originates in the '*Marsh*, undoubtedly.'" The prevalence of these fevers "indicates the presence of a powerful blood-poison. This same blood-poison is manifest, and gives type to most of the sickness in these parts."

From more remote parts of the State, I have received only answers denying the presence of intermittent in their several localities. Dr. Platt, of Waterbury, and Dr. Knight, of Lakeville, both declare that the disease has not occurred indigenously in their places for many years, and Dr. Knight expresses his belief that the upper Housatonic valley is, and has been for many years, entirely free from it. As we have seen, it was very prevalent there in the latter part of the last century, and occasionally so in the first third of the present, at a time when the lower Connecticut valley was free from it. Dr. Williams, of Pomfret, Dr. Woodward, of Franklin, Dr. Porter, of New London, and Dr. Smith, of Springfield, Mass., all deny any knowledge of indigenous cases, though Dr. Williams thinks it is approaching from the south, and Dr. Smith has found the malarial type prevailing in other diseases. Dr. Porter, who during an active practice of more than forty years in New London, had never known a case of malarial disease to originate there, says, that "We see cases of different kinds where, owing to the *general aspect*, we are emboldened to give quinine, the great specific in malaria, in doses that a few years since we were accustomed to regard as quite heroic for New England."

Having thus laid before you such facts as I have been able to glean amid the cares and labors of my professional duties, shall I turn for the few moments left me, to the vexed question of the origin and causes of this class of diseases? We claim that medical science is a true science, one based upon induction from carefully and accurately observed facts; and in all the ages since the time of Hippocrates, the most earnest members of our profession have been engaged in collecting, collating, and comparing facts, in order to ascertain the origin and causes of the diseases which afflict

the human body. The field is wide, the methods pursued various, and the results reached not always satisfactory. The whole class of febrile diseases, and especially those in which there is a marked intermission or remission, and a regular return at a certain interval of the exacerbations, have in all ages been the subject of controversy. Neither the skillful use of the scalpel, or the microscope, the arts of the chemist, the researches of the physiologist, nor the note-books of the most careful and critical observers, have settled conclusively the various questions which have arisen on these subjects. What so many and so eminent physicians have failed to attain, it would be presumption for us to hope to accomplish; we can only add a few suggestions, which we may be permitted to believe may aid in its future solution. There have been six theories in regard to the origin of intermittent and remittent fevers: I. The marsh, or paludal theory, which attributes to the exhalations of marshes, partially drained ponds, soils containing decaying vegetable and animal substances, especially if saturated with water and then exposed to a very hot sun for weeks, and soils permeated by foul and unwholesome gases, the power of producing these diseases. II. The theory of aerial transmission, that mysterious power which wafts on the wings of the wind epidemic diseases. This theory would account for the progress of intermittent fever in the same way which it does in the transmission of cholera. III. The theory of transmission by spores or cells. This may be regarded as rather a restriction of the theory of aerial transmission to a single method, than an independent theory. IV. The theory of propagation by bacteria or other low forms of animal life. This is also a modification of aerial transmission, and is often called the "germ theory." V. The theory of a change of diathesis in diseases, which presupposes such a change in the human constitution in certain districts of country, and under certain conditions, as renders it susceptible to particular forms of disease, and requires the administration of medicines, or remedial measures, which had been previously contraindicated. Such a change of diathesis is generally believed to have taken place in the Connecticut River valley and in other parts of New England, in the early part of the present century, in which febrile diseases generally assumed an asthenic character, and rendered a supporting, in the place of a depleting, course of treatment, necessary. VI. The theory of climatic changes as affecting disease. Greater and more protracted heat, a diminished rainfall, a higher yearly average of temperature as affected by a closer approach of the gulf stream to the coast, or

by electric or other modifications, the presence or absence of ozone in the atmosphere, &c., &c.

Each of these theories has had its advocates, who have stoutly defended their several positions, and often with a good degree of positiveness. Each has brought a considerable array of facts to sustain his theory; but like the knights in the old legend, few or none of them have looked at both sides of the shield. With the moderate amount of investigation I have been able to give the subject, it has seemed to me, gentlemen not at all impossible that several of these theories might be true, and that the agencies to which they attribute the disease, might exert a combined influence in producing it, some of them being more potent in one locality, and others in another. Pardon me if I do not take them up in the order in which I have presented them, for these remarks are intended to be merely suggestive, and not to possess any *ex cathedra* authority. The observations made by Dr. Bronson, and those with which my medical brethren have favored me, have seemed to me to point very strongly to one conclusion, viz: that the *remote* cause of the disease is to be found in a gradual change of diathesis, sometimes preceding by several years, the actual outbreak of the disease, or at least its appearance as an epidemic; a change which gives a malarial type to existing febrile affections and occasionally developes itself in a more marked degree, in sporadic cases of intermittent or remittent fever.

The late Prof. Charles Hooker advocated this view in regard to New Haven, as early as 1853, and supported it with great zeal and an array of facts, one of them at least, viz: the increased tolerance of quinine in cases of fever, and the beneficial effects resulting from its administration, possessing great weight and importance.

The existence of sporadic cases of intermittent in about every town, some years before the general outbreak of the disease, and the fact mentioned by several of my own correspondents in towns not yet reached by it, of a so-called "*Malarial type*," impressing itself upon other forms of fever, as well as upon various kinds of disease, go far to prove that such a change has already taken place in many sections of the State, and that it is extending northward in a slow and somewhat irregular progress. I do not think it unreasonable to predict, that towns and cities, where the malarial influence is now felt to a greater or less degree, will ere long be visited by a more decided manifestation of the poison. But

while believing that this change of diathesis acts as a remote cause and prepares the way for the onset of the diseases of which it is the forerunner, I can see no objection to the admission, that exhalations from marshes, partially drained lands, heaps of decaying vegetable matters reeking in the hot sun, upturned alluvial soils, or even excavations for sewers and buildings may, under certain conditions, produce or become the proximate cause of intermittent and other forms of malarial diseases, where this changed diathesis has already prepared the soil for the seeds of disease to germinate. The testimony in regard to the effect of such exhalations, in many instances, both in Dr. Bronson's and my own collection of cases, is too conclusive to admit of a doubt that they must be reckoned among the proximate causes, though they may not be, and probably are not the sole ones; the East Hartford cases, those in Wethersfield avenue, those reported by Dr. Comings of New Britain, Dr. Catlin of Meriden, and by Dr. Hazen of Haddam, are very important in this connection.

Again, the theory of aerial transmission, as a proximate cause, accounts very satisfactorily for many cases which have puzzled the profession. We are learning something new every day in regard to the subtle and invisible agencies which permeate the atmosphere and transform its healthful breezes into the very breath of the charnel-house. These volatile agencies, which rise from the lower grounds, and ascend into the atmosphere, driven by the winds, bear their poison to higher grounds, and to dwellings, perhaps three, four, or even five miles away. There is also something mysterious in the differing effect of the exhalations, by night and by day, and the increase of peril, from exposure to them, when laden with the night dews. Dr. R. M. Griswold referred to this in relation to the prevalence of intermittent at Cromwell, the occurrence of intermittent and congestive chills on the steamboats on the Potomac River, in the late summer and early autumn, are also examples of the aerial transmission of the disease; and an incident reported in the *American Journal of Medical Sciences* some years ago, illustrates the same thing. A wealthy planter in Accomac County, on the eastern shore of Virginia, had his residence on an elevated knoll, about two miles inland from the ocean; his house was protected from the ocean winds, by a belt of heavy timber, which lay between it and the sea. His family were anxious to have a view of the sea, and to be able to watch with a good glass, the ships which passed within the range assisted vision. To

gratify them, he had a broad avenue cut through the forest, directly in a line with his house, which furnished a good vista. They were delighted, but they soon found that when the windows were open at night toward the sea, the breezes were laden with pestilence, and the whole family fell victims to malignant intermittent. Dr. Joseph Wilson, medical director U. S. Navy, says, "Malaria affects the human organism only during the night." (Transactions American Medical Association, 1876.) Dr. Benjamin Rush, in an article on the "causes of the increase of bilious and intermitting fevers, in Pennsylvania." in 1785, remarking on the spread of these fevers, says: "It has been remarked, that intermittents on the shores of the Susquehanna, have kept an exact pace with the passages which have been opened for the propagation of marsh effluvia, by cutting down the wood which formerly grew in its neighborhood. I remember the time when intermittents were known only within half a mile in some places of the river. They are now to be met with ten miles from it, in the same parts of the State." The occurrence of the disease on hills, one hundred feet or more, above partially drained ponds, and two or three miles away, so often referred to by Dr. Bronson, and which has puzzled some of my correspondents, is well accounted for on this theory of aerial transmission. I am disposed to look with a good degree of favor upon those theories which would seek in the presence of vegetable and animal germs for some of the proximate causes of intermittent and remittent fevers, the propagation of cholera, of diphtheria, and of hay fever, by means of vegetable and animal germs, seems to be at last pretty generally conceded, and there is no such broad distinction between these diseases and intermittent, as to render a similar means of dissemination, in the case of that disease, impossible.

Recent experiments, conducted by Prof. Tyndall with great care, for the purpose of determining the question of spontaneous generation, has established the fact that atmospheric air, however carefully filtered, contains a considerable number of bacteria, and he has succeeded in making them visible under the microscope. By similar careful observations other microscopists have demonstrated the presence of the spores of vegetable fungi in the atmosphere. The use of the microscope has also revealed the fact that water, and especially stagnant water, contains myriads of the minutest forms of animal life. It is not an extravagant supposition that those night breezes, which near the Connecticut and other rivers have

proved such swift messengers of disease, may bear some spores of vegetable fungi, or some of the lowest forms of animal life, like the bacteria, bred from decay, which may cause disease whenever their progress is arrested. Thus five of these theories are disposed of without the denial of either. As to the sixth, I submit that there is needed a much larger accumulation of careful observations, made under a great variety of conditions, before we shall be prepared to form an opinion upon the effects of ozone upon the human body in health and disease, and before we shall be able to decide how many of the alleged climatic changes are facts, and how many belong to the realm of fancy. There is, however, one consideration, which should not be overlooked in this connection, viz., the prevalence of a high temperature, continued for many successive days, if not a necessary, seems to be an important factor, in the development of malarial fevers.

It forms no part of my purpose, in this brief and hasty glance at the history and progress of periodic, intermittent, and remittent fevers, to speak of the modes of treatment. These are too well established to justify me in occupying any of your time in their discussion; but I may, perhaps, be indulged in a few suggestions relative to sanitary precautions, which may possibly prevent, in part, their rapid development. I know of no method by which we can effect any change in the mysterious agency, which, for the want of a better name, we have called a "change of diathesis." We are compelled to believe in its existence. The fathers of the profession have recorded the remarkable transition, in the early years of the present century, of the sthenic to the asthenic types of disease.

Within the past few years, the indications of another change have attracted our attention, we have found the law of periodicity becoming an element in many of our febrile cases, and what has been termed by several of my correspondents, a "paroxysmal," and "malarial type," manifesting itself in other forms of disease. Until we know, more definitely, what this subtle agency which brings about such changes is, and whether it pervades the air, or is found in light, heat, electricity, galvanism, magnetism, or the nervous fluid, or neither of these, we are certainly unprepared to attempt to modify its action. But, so far as the proximate causes of these diseases are concerned, whether we attribute them to the exhalations from marshes, partly drained lands, ponds, or rivers, or the vegetable spores, or animal germs, or aerial transmissions, there are measures which may be adopted, which will divest them,

partially at least, of their power for evil. The construction of tile drains, to convey away the surface waters from lands underlaid by a dense, stiff, tenacious clay, is a preventive measure of great importance. In our cities, much benefit results from a systematic and thorough construction of sewers, and no city can have a satisfactory death rate, which neglects this. In the country, every marshy and wet piece of ground should be drained, and the overflowed lands from pond, mill-dam, or river, should be intersected by drains, which will absorb and carry off all surplus water. The upturning of clayey and alluvial soils, during protracted hot and dry seasons, should be avoided. So far as it is practicable, the waters of streams and ponds should be confined within circumscribed limits. But where this cannot be successfully accomplished, as in the case of large rivers or extensive ponds, protection should be sought in the planting and cultivation of forest trees along their borders, to absorb, or otherwise prevent the spread of malaria. You are doubtless all familiar with the statements which have been published with regard to the virtues of the Eucalyptus Globulous. It is claimed that if this tree is planted, in considerable numbers, on the windward side of the banks of these marshes, ponds, or rivers, it absorbs, completely, all these malarial exhalations, and renders the region perfectly healthful. But unfortunately for us, the Eucalyptus is a tropical, or semi-tropical plant, and while it grows there to be the largest giant of the forest, it would perish under the severe cold of our northern winters. Yet we are not left without a resource. The pine can be used as a very good substitute for it, and the common sunflower (*Helianthus annuus*), which, if it is not especially attractive to an æsthetic taste, will, nevertheless, prove itself to be very useful; for if planted on the windward side of infected regions, it is said that it absorbs the malarious influences, and will soon put a stop to all the intermittent and remittent fevers which have been bred there. Moreover, the raising of this plant can be made a source of profit to the producer, in a pecuniary point of view, so that by encouraging its cultivation, in all places where there is reason to suspect the exhalation of miasmatic vapor, we shall be conferring a favor upon the community in a double sense.

Now, as regards this entire subject of malaria, while it must be admitted that there is still much which is obscure and undefined, that there are questions connected with it, which neither the most acute observer, the skillful manipulations of the chemist, nor the

untiring labors of the microscopist, has been able fully to solve; yet may we not indulge the hope, nay, the expectation, that at no distant day the light of science will reveal and render certain very much which is now only conjecture. Malaria may justly be considered among the greatest evils which afflict mankind. Whatever, then, can be done towards checking its progress, allaying its ravages, or preventing its development, is worthy the noblest effort of the physician.

In concluding this rapid review of the history, origin, and progress of this formidable disease, you will pardon me, gentlemen, for reiterating the oft-repeated truth, that there rests upon our profession a great responsibility to the people of our State. We cannot meet this responsibility by simply following the routine of a daily practice. Our profession demands something broader and nobler than this; a careful and constant observation and classification of all the facts which come in our way, and a ready application of them to the amelioration of disease and the promotion of the best interests of society. Whatever we can do toward substituting pure air for foul and poisonous exhalations, driving away and stamping out epidemics, reducing the rate of both sickness and mortality, adding to the health and physical vigor of the community, and promoting temperance and purity, it is our duty and privilege to do. We war against physical evils, which are often the results of moral obliquity, and we should be careful not to mistake effects for causes. The physician may be as great a benefactor to the community in which he dwells as the clergyman, and as truly a hero as he who risks his life on the field of battle—for sincere love to God and love to man, is the highest attainment of which the human heart is capable, and the one most honored by God himself; for as a distinguished poet, and eminent member of our profession, has so truly said:

> "While valor's haughty champions wait
> Till all the scars be shown;
> Love walks unchallenged through the gate,
> To sit beside the Throne."

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

The subjects which are of professional interest being chiefly such as are connected either directly or indirectly with the health of the citizens of the State, your Committee have endeavored to learn what diseases have mostly prevailed, and what localities have been visited by sickness more or less than usual.

The method of inquiry heretofore pursued, has been varied only by sending the circular of questions directly to each member of the Society, instead of through the Reporters appointed by the counties. This was done partly at the suggestion of some of the Reporters of last year, and partly because the Committee were not informed who had been appointed Reporters in the different counties. We doubt if the change was judicious. Of the three or four hundred members of the Society to whom the circular was sent, only sixteen had responded at the first of May; while but four of the eight Reporters have been heard from at the present writing. The Committee fear that what was intended to relieve the Reporters of trouble and expense, they have assumed would also relieve them of their responsibilities. It is hoped the next Committee will profit by this experience, and hold the county Reporters to their full duties.

The questions proposed were the following:

Questions.

1. What have been the prevailing diseases in your locality during the year ending in April, 1877?
2. Have any new or infrequent diseases occurred?
3. If "remarkable and instructive cases of disease" have occurred in your practice, will you please report them in writing to your County Reporter or directly to the Committee?
4. In what respect have you observed that children have suffered in their health, in consequence of their attendance upon the public schools?
5. To what special influences, as regards their tasks, their discipline,

or the hygienic conditions of school-houses, have you attributed the injury?

The replies have been more full and more numerous to the first question than to the others. And at this writing answers have been received from one or more towns in each of the counties. Although it is the fact that the Committee are disappointed in not receiving *more* responses, yet because what information is received comes from sources so uniformly distributed throughout the State, it is possible to estimate in a general way, and correctly, the sanitary condition of the people of Connecticut during the year ending last April.

No severe epidemics have been experienced, although a few of limited extent and generally of mild character have prevailed. Whooping cough, measles, scarlet fever, and diphtheria are spoken of by different correspondents in this way in several towns. Yet even in those places where it is stated that such epidemics have prevailed, it is also frequently asserted that the aggregate amount of sickness and mortality has been less than usual, as compared with previous years. Therefore your Committee believe that the just and reliable inference from the communications which have been received, is, that the health of the people of Connecticut during the year just ended has been generally better than ordinary.

In the year previous, diphtheria was prevailing with more than usual frequency and fatality throughout the State, but during the past year it is not mentioned with so much prominence, and it is undoubtedly abating except in particular localities. Pneumonia, too, is often spoken of as being less frequent and more manageable.

It will accord with previous practice and also be more satisfactory, if the sanitary condition of the counties are reviewed in order.

HARTFORD COUNTY.

The appointed Reporter of this County Association, Dr. Wilcox, sends as usual a carefully written summary of the sanitary condition of his county for the past year. The general health of the people is stated to have been uninterrupted by any serious epidemics, and on the whole the comparative health of his people has been satisfactory.

He has enumerated the more prevalent disorders, and also those which are prevailing with less than usual frequency. His report will be read with profit and interest.

Accompanying his report, he sends interesting reports of cases, by himself and other writers of the Hartford County Association, all of which will be found published in their proper place in the proceedings of the Society.

The several places heard from agree in the statement that the past year has been peculiarly exempt from dangerous diseases.

BLOOMFIELD—*Dr. Gray.* There have been no prevailing diseases, and during the whole year, the town has been unusually healthy.

ROCKY HILL—*Dr. R. W. Griswold* writes that cases which previous to six years ago, developed into typhoid and bilious fevers, would now, if allowed legitimate progress, become nineteen times in twenty unmistakably intermittent.

WETHERSFIELD—*Dr. Warner* illustrates the absence of epidemics in his town by quoting from the Registrar's records, that thirty-four deaths in the town resulted from twenty-two different causes. He mentions the infrequency of typhoid and intermittent fevers, and declares that consumption is markedly less than twenty-five years ago. He asserts that not one instance of death from it during the past year, originated in the town or happened to a native.

SUFFIELD—*Dr. Mason* writes: "On the whole the year has been exceptionally healthy."

NEW HAVEN COUNTY.

Dr. W. R. Bartlett is the Reporter for this county, and communicates a general statement of the health of the people, more particularly of the city, to the effect that the extent and degree of sickness is about an average of the last few years.

Our other correspondents are in Cheshire, Hamden, Branford, North Haven, and Waterbury.

From these reports it is apparent that the general sanitary condition of the county is not inferior to that of the other counties.

CHESHIRE—*Dr. Chamberlin.* "Measles has prevailed in Cheshire as an epidemic but without any fatality. A few cases of mumps followed the measles. Has been little pneumonia during the past winter."

NORTH HAVEN—*Dr. Goodyear.* "Pneumonia has been unusually severe and fatal—six fatal cases in 1876, seven in 1875, and three in 1874."

"I have had twelve cases of scarlatina in my own practice in one neighborhood—all recovered—cases were mild but well marked."

WATERBURY—*Dr. Platt.* "The whole year has been exempt from the prevalence of any serious disease."

BRANFORD—*Dr. Gaylord.* "The year ending April, 1877, has been a remarkably healthful one in this locality. No epidemic of disease has prevailed. Our fevers have assumed mainly the malarial type, yet not so decidedly as in previous years. Have met but few cases of typhoid fever, and a few sporadic cases of scarlet fever."

NEW LONDON COUNTY.

The only response to the circular of the committee from this county is from the regular Reporter, Dr. Paddock, of Norwich. He very justly complains that his recent appointment does not enable him to do justice to an undertaking so important as reporting upon the sanitary condition of the whole county for the preceding year. And he offers the wise suggestion that the reporter should be appointed at the beginning rather than at the end of the year he is to report upon.

Dr. Paddock from his own experience communicates an interesting report. After briefly mentioning the disorders which have been most frequent, and noting the fact that epidemics have not occurred, he concludes his report with several unique cases in his own practice.

FAIRFIELD COUNTY.

But two communications have been received, both from Bridgeport—one by Dr. Wordin, and the other by Dr. Sheffrey. Both speak of the sanitary condition of that locality as being generally good, besides a lesser amount of the usual disorders prevalent at the different seasons. Scarlet fever and measles have occurred in an epidemic way, the latter being of a severe type, and often followed by dangerous and fatal sequelæ.

Dr. Wordin gives an abstract of the mortality in the city, taken from the records of the Town Registrar, and supplements their significance by some meteorological statistics from his own recorded observations.

It is very much to be regretted that in a county as populous as that of Fairfield, not one of the profession can be found to give an intelligent summary of its sanitary condition during the past year.

WINDHAM COUNTY.

The statements received from Dr. Kent, the Reporter for Windham county, show a satisfactory state of health among its people.

He says, "there has not been the usual amount of sickness. * * * No epidemic. * * * Mortuary record less than for years." He also mentions that typhoid fever has been less frequent, and that the disorders of the summer, as dysentery, cholera infantum, and other bowel affections, were mild and infrequent, "and it is a remarkable fact that there have been very few well marked cases of pneumonia."

He concludes his report with the relation of several interesting cases of rheumatism, for the purpose of illustrating the therapeutic value of salicylic acid.

Dr. Kent explains that his report applies chiefly to Putnam and vicinity, in the remote northeastern part of his county, and is based almost wholly upon his personal knowledge of facts, because he could get no aid from his professional brethren.

Two other communications have also been received. One from Dr. Huntington of Windham, on the opposite side of the county, and another from Dr. Simmons of Ashford, nearer the center.

Dr. H. reports Windham village as probably the healthiest place in the world. They have pure air and pure water, and no miasmatic diseases. The fevers are so mild and easy that there has been but one fatal case in the last sixteen years, and that one came there from somewhere else. There have been only three or four cases of phthisis in the last fifteen years, and no more of pneumonia. There has been one fatal case of diphtheria, but *none of scarlatina in ten years.* It must be the banner town.

From Ashford, Dr. Simmons writes that there has been no unusual sickness either in kind or amount, and mentions the entire absence of scarlatina and diphtheria.

LITCHFIELD COUNTY.

The Reporter of Litchfield County Association, Dr. L. H. Wood, has done his duty faithfully, and given a good summary of the extent of sickness through the county during the past year. The method adopted in that county might be imitated in some others, with perhaps as good results.

At the annual meeting of the County Association the members present inform the Reporter and each other as to the state of health in their own localities, and from the information thus given, Dr. Wood has been able to make a very satisfactory report.

He says the general health of the county has been unusually good during the whole year, especially as regards the disorders of summer.

When disease has occurred as an epidemic it has been mild in character. Such was measles through Plymouth and Thomaston. Wide spread epidemics of scarlatina and whooping-cough had a like type. In Litchfield there were forty cases of the former without one fatal result, and the cases scarcely required treatment.

In Wolcottville, scarlatina was fatal in a few Irish families only.

Whooping-cough has been prevalent throughout the county, adults frequently undergoing the second attack of it, and in some cases being complicated with pneumonia or bronchitis terminating fatally. Uncomplicated pneumonia has been less frequent and milder than usual; but few fatal cases.

MIDDLESEX COUNTY.

The Reporter of this County Association has not been heard from. But Dr. Hazen of Haddam, Dr. Worthington of Middle Haddam, Dr. Webb of Madison, Dr. Turner of Chester, and Dr. Johnson of Clinton, have each sent a report of the state of public health in their respective localities.

There is a remarkable unanimity of statement affirming the unusual salubrity of the past year in the towns mentioned, and which may be supposed to have been shared in by the other towns in the county.

The following quotations indicate the prevailing healthfulness.

HADDAM—*Dr. Hazen.* "Only the usual diseases and less than the average amount of sickness."

MIDDLE HADDAM—*Dr. Worthington.* "The only prevailing *complaint* in this locality, during the past year has been want of business, and that has even attacked the physicians."

MADISON—*Dr. Webb.* "The past year with us has been one of remarkable health."

CHESTER—*Dr. Turner.* "A year of unusual health in all this region."

TOLLAND COUNTY.

The Reporter of the Tolland County Association has also failed; but Dr. Preston of Tolland, sends the following satisfactory statement: "The most healthy season for thirty years."

This completes our analysis of the sanitary condition of the several counties, so far as reports have been received. The people of Connecticut are to be congratulated upon the fact, that for one year at least, they have enjoyed a period of comparatively excellent health.

The committee desire also to record the fact that from every county in the State, (this year for the first time,) some report has been received, either from the appointed Reporter, or from other members of the Society.

The replies to the second question, viz.: "Have any new or infrequent diseases occurred?" are all in the negative, except one by Dr. Wood, of Wolcottville; who mentions a "sort of sore throat with ear-ache and discharge, in both adults and children, without scarlatina." It has appeared in Litchfield, Goshen, and Warren.

To the third inquiry for "remarkable and instructive cases of disease," there are a number of responses. These will be referred to the committee of publication, and will be found in their proper place in the printed "proceedings." Many of them will be found profitable and suggestive reading, while some were received at so late a date that the committee have not had time to examine them.

Public Schools.

To the fourth and fifth inquiries respecting the health of children in the public schools, the committee have not received responses as largely as they expected. The subject does not seem as yet to have attracted that degree of attention in Connecticut that it has in some other states.

The few correspondents who have taken any notice of these inquiries reply in a majority of instances. that the health of children has not been sensibly disturbed by any influences to which they are subjected in the school-room.

It is but right to state, however, that the said correspondents do not claim to have given special study to an investigation of the hygienic condition of their schools, but for the most part reply only as giving their opinions based on the opportunities of observation afforded in their daily practice.

Below are given some quotations indicating the sentiments of the writers on these topics:

Wethersfield—*Dr. Warner.* "Our schools are not of a character to overtax the brain, nor is the discipline likely to impair the constitution of the pupils much. I have seen nothing to cause alarm in that direction."

Rocky Hill—*Dr. Griswold.* "The popular lecturer on school-house architecture, and school-room ventilation would tell us that the places in our town used for school purposes were abortions as to the first, and disgraceful as to the latter; and so extremely prejudicial to health. They are of the style of forty or fifty years ago. And yet ignoring all that the popular lecturer says, and in outrageous defiance of all the

rules the scientific hygienist lays down, as absolutely essential for the preservation of a decent degree of health, I am obliged as a practitioner ready for jobs in my line of business to say, that the lack of professional requirements originating in our school-rooms is quite distressing. If we accept as true the basis from which the popular lecturer proceeds, I will be greatly obliged to him if he will tell me why the school children of my locality enjoy such excellent physical stamina, in defiance of all his rules."

"Hartford and New Haven are, it is well known, each justly proud of their public schools, but upon these questions they are both entirely (shall we say judiciously?) silent. This omission to answer the school questions ought to be understood as indicating that the hygiene of the schools in both those places is beyond criticism."

Branford—*Dr. Gaylord.* "Have not observed any illness from attendance at school. We might reasonably expect serious results from the close confinement, for the accommodation is not adequate to the number in attendance, and the hygienic conditions of our school buildings are decidedly inferior."

New London—*Dr. Paddock.* "The working of our public schools is so admirable, and the ventilation of the rooms so perfect, that I cannot think the scholars suffer. Neither do they seem to be overtaxed in their studies, to the injury of their health."

Putnam—*Dr. Kent.* "Have suffered from anæmia and chlorosis—due chiefly to ill ventilation and too close application to books."

Ashford—*Dr. Simmons.* "Our school-houses are large for the number of scholars attending—no crowding or want of ventilation, and the children have not suffered."

Wolcottville—*Dr. Hanchett.* "Thinks children are often injured by being kept in at recess, without allowing them to urinate."

Washington—*Dr. Brown.* "Thinks pneumonia may arise from poor ventilation."

Thomaston—*Dr. Goodwin.* "Fears that sufficient discretion is not used in the mode of lighting, and that many eyes are injured thereby," citing an instance within his personal knowledge.

Clinton—*Dr. Johnson.* "I have noticed nothing to warrant criticism of our public schools."

Madison—*Dr. Webb.* "I have had no children under my care injured."

Haddam—*Dr. Hazen.* "Children suffer particularly in affections of the nervous system, almost wholly from overtasking them. This is apt to be the case with promising and precocious pupils, ambitious teachers and parents crowd them along."

Chester.—*Dr. Turner.* "Nothing of interest to report—good school-houses, pure air, and general good management."

COLUMBIA—*Dr. LaPierre.* "They suffer from diseases of the respiratory system, also diseases of the digestive system—due in great measure to lack of ventilation and extremes of temperature in the school-room."

TYPHOID FEVER AND MALARIAL FEVERS.

At the end of the first week in May, so few responses to the circular had been received, that despairing of getting enough material for a creditable report, the chairman of the committee caused the following questions to be printed upon postal cards:

"How much has typhoid fever prevailed in your town during the year ending April, 1877, as compared with previous years? Ditto malarial fevers?"

He sent these on the 9th of May, to one or more physicians in every town in the State, and the responses have been more numerous than to the first circular. Indeed from that date almost to the present he has been in daily receipt of replies to both circulars.

This delayed correspondence has very much embarrassed the labors of the committee—new reports constantly requiring a revision of what had been already written for this report.

The committee for next year will be entirely excusable, if they rigidly ignore all communications received after a fixed date.

The results of these inquiries have developed facts of great interest, and well worthy the thoughtful attention of the profession. With one consent from almost every part of the State, the tidings are—"typhoid fever is much less frequent than before." From over fifty towns in the State, so scattered that every county is represented, responses on this point have been received. But one place in Hartford County claims an increased prevalence, viz.: Windsor Locks. In New London County one—Stonington. But in Middlesex County the exceptions were more numerous, of the seven towns reporting, four, Middletown, Essex, Clinton, and Durham, stated that typhoid fever had increased; in Middle Haddam it was reported less, while in Chester and Deep River no change was observed respecting its prevalence. Every other place in the State heard from, reported this form of fever as conspicuously less than before, excepting six in which no change had been noticed.

There is not so much uniformity in the replies regarding the prevalence of malarial fevers. Of the fifty towns heard from on this point malarial fevers have increased in twenty-two; diminished in eighteen, and no change has been observed in their prevalence in ten.

HARTFORD COUNTY.

They are reported as having "doubled" in Hartford—*Dr. Chamberlain.*

Dr. Avery gives it as his opinion that the general prevalence of malarial fever in Hartford is, to a certain extent, due to the unsanitary condition of Park river, which runs through the city and empties into the Connecticut. The sewage of a large portion of the city empties directly into Park river, and the stench therefrom is offensive, and cannot but be deleterious to the health of the citizens.

Increased very "largely" in New Britain.—*Dr. Comings.*

PLAINVILLE—"We have had no cases of typhoid fever during the year past, to my knowledge. Several cases of malarial fever occurred between this place and New Britain, in the vicinity of a dog pond."—*Dr. Moody.*

Began in ROCKY HILL in 1872, and steadily increased "until probably fifty cases last year."—*Dr. Griswold.*

In BERLIN it is reported "quite common." * * * "Not showing itself on our trap elevations but following the streams."—*Dr. Brandegee.*

In WETHERSFIELD—"Less than for some years."—*Dr. Warner.*

WINDSOR LOCKS—"No cases in my practice."— *Dr. Burnap.*

GLASTONBURY—"Should think not one-half the usual amount."—*Dr. Bunce.*

SUFFIELD—"We have had none."—*Dr. Mason.*

BRISTOL—"Marked malarial diseases more frequently than in any previous year."— *Dr. Way.*

EAST WINDSOR HILL—"More cases of intermittent fever have occurred than for thirty years before."—*Dr. Rockwell.*

COLLINSVILLE—"Malarial fevers have been more abundant than usual, for the past six or seven years, each year showing an increase over the preceding one."—*Dr. Shepherd.*

GRANBY—"Malarial fever we never have."—*Dr. Edwards.*

NEW HAVEN COUNTY.

Of the towns heard from in New Haven County the following extracts from the reports are significant:

NEW HAVEN—"Less of the characteristic intermittent form, but more of the masked and irregular forms.—*New Haven Medical Association.*

WEST HAVEN—"Quite prevalent—within a radius of a half-mile from

two large ponds hardly a family has escaped congestive chills, and remittent fevers have occurred."—*Dr. Barnett.*

North Haven—Typho-malarial and remittents have been prevalent; nearly all the fevers have been of this character."—*Dr. Goodyear.*

Wallingford—"We have had a large number of cases of malarial fever, and *many* cases of marked typho-malarial fever."—*Dr. McGaughey.*

Branford—"Malarial fever has been the prevailing type of fever for a number of years past."—*Dr. Gaylord.*

Guilford—We have some malarial fever, perhaps about the same as heretofore."—*Dr. Reynolds.*

Madison—"Only now and then a case, ... few and far between." —*Dr. Webb.*

Derby—"Malarial fevers have been quite frequent, and are becoming more so every month—did not prevail here until about two years ago." —*Dr. Pinney.*

Cheshire—"More of 'dumb ague,' though less of the regular chills and fever."—*Dr. Chamberlin.*

Waterbury—"Intermittent fever does not occur in Waterbury to any extent."—*Dr. Bartlett.*

"There was less malarial fever in Waterbury during the year ending April, 1877, than for several years previous."—*Dr. Platt.*

"Malarial fevers are but little known among us at any time."—*Dr. Castle.*

West Meriden—"Malarial fevers have been much less than for several years immediately previous."—*Dr. Catlin.*

NEW LONDON COUNTY.

The towns in New London County report on the prevalence of malarial fever as follows:

New London—Malaria is nearly, if not entirely, unknown within our borders—"my own experience authorizes the expression 'absolutely.'"—*Dr. Porter.*

"We have no malarial fever *de novo*."—*Dr. Nelson.*

Norwich—"I never knew of a case of intermittent or remittent fever that originated in this locality."—*Dr. Paddock.*

Franklin—"Malarial fevers have not prevailed at all."—*Dr. Woodward.*

Old Lyme—"Intermittent fever is certainly increasing. Last year I can recall fifteen cases among our residents. Five years ago the rule was never to find a case originating here."—*Dr. Harris.*

JEWETT CITY—"We rarely have a case that owes its origin to these parts."—*Dr. Jennings.*

STONINGTON—"We have had no malarial fever."—*Dr. Brayton.*

The following extracts from correspondents indicate the prevalence of malarial fevers in the towns of

FAIRFIELD COUNTY.

BRIDGEPORT—"The type of all our diseases is influenced by the widespread effects of malarial infection."—*Dr. Lewis.*

NORWALK—"Since 1875, there have occurred a few cases of typhoid fever and not so much malarial fever, and the latter had more typhoid complications."—*Dr. Lockwood.*

BETHEL—"Typhoid fever has not prevailed as extensively in this town, the past year, as previously—but bilious and remittent more."—*Dr. Barber.*

WESTPORT—"Typhoid fever has prevailed much less during the past year than in previous years, but malarial complications seem to enter into almost everything I come in contact with."—*Dr. Bouton.*

HUNTINGTON—"Malarial diseases in their various forms have increased each year since 1870. It appears to be the fact that, during the past seven years, as certainly as intermittent fever has steadily increased, so surely has typhoid fever decreased."—*Dr. Shelton.*

WINDHAM COUNTY.

From Windham County responses are received from Windham, Pomfret, and Putnam. In all these places they disclaim any acquaintance with either typhoid or malarial fevers.

The correspondents of Litchfield County, with one exception, emphatically deny the presence of malaria within their boundaries.

LITCHFIELD—"Malarial fevers we never have," says *Dr. Deming.*

Dr. Derrickson, of WARREN, writes, "Malarial fevers NONE."

From HARWINTON, *Dr. Buell* asserts that he has "never been acquainted with an indigenous case of malarial fever."

LAKEVILLE—*Dr. Knight.* "I come in contact with no malarial fevers."

But *Dr. Lyman*, of NEW PRESTON, a little south of any of the above-named towns, admits that "malarial fevers have been more frequent."

MIDDLESEX COUNTY

Reports as follows:

MIDDLETOWN—*Dr. Edgerton.* "Probably *one-half or even more* of our population have had within a few years some form of malarial fever,

mostly the intermittent. Last year was no exception to those previous. So far as I can judge, there were quite as many cases as during any other year since its first invasion, about 1870." Dr. Edgerton's remarks upon these and typhoid fever are interesting, and will be published in full.

MIDDLE HADDAM—"Less than before. Malarial complaints seem to be moving east."—*Dr. Worthington.*

DURHAM—"Malarial influence is hardly felt in the diseases of this vicinity."—*Dr. Mathewson.*

DEEP RIVER—"Malarial fevers have been very infrequent here."—*Dr. Bidwell.*

ESSEX—"Both typhoid and malarial fevers have prevailed to a greater extent during the last year than for several previous years."—*Dr. Hubbard.*

CHESTER—*Dr. Turner.* "Less malarial fever than for four or five years past. Typhoid fever about the average."

TOLLAND COUNTY.

The few reports from this county indicate that malarial influences are invading its limits.

STAFFORD SPRINGS—*Dr. Newton.* "Malarial fevers prevail only to a very limited extent."

COLUMBIA—*Dr. LaPierre.* "I have noted three cases in my practice, the past year, of intermittent fever, which is an infrequent disease here, as I have never known a case before in this vicinity."

But from TOLLAND, *Dr. Preston* writes, "No typhoid fever of consequence, or malarial fever, has been in our midst the past year. The most healthy season for thirty years."

Other communications have been received by the Committee, but at too late a date to obtain attention in this report.

Your Committee have also received reports of cases, papers, etc., intended for, and worthy of publication, but unfit for the printer, and will fail of that result, because the manuscript is upon both sides of the paper, and your Committee have neither the time or inclination to undertake the labor of transcribing it.

From the accumulated evidence bearing upon the sanitary condition of the citizens of the Commonwealth of Connecticut during the past year, two or three quite clear conclusions can be safely inferred, to wit: That the healthfulness of the people has been generally better than the average for previous years; that even in localities where epidemics have prevailed, the total mortality

has not been greater than the usual total in the same places, with most remarkably few exceptions; that for the most part the type of diseases has been milder; that almost everywhere in the State, that formidable disease, typhoid fever, is less prevalent and modified in severity; and finally, that a class of disorders attributed by common consent to a mysterious potency we call *malaria*, is everywhere extending even to places where it has previously been unknown for generations. That there is some principle of exchange or substitution of the disturbing powers upon the human system, is a thought which has occurred to many. The facts are clear and not doubtful. Their consideration will afford ample fields for the investigation of the sanitarian as well as the physician. Old malarial theories are unsatisfactory and incomplete to explain these varied phases of pathology, particularly in the complication of lessened typhoid and increased malarial fevers.

REGISTRATION OF VITAL STATISTICS.

At the last Convention a committee was appointed (of which the writer was one) to take such measures as would improve the methods and means of the Registration of the Vital Statistics in the towns of the State, and also in behalf of the Society to ask the co-operation of the State Librarian, whose duty it is to collate and publish the results of such registration. The Committee promptly attended to the duty assigned them, and prepared an improved and more perfect nomenclature, devised better forms of certificates and records, and respectfully requested the State Librarian to adopt them. It is with much regret that we are obliged to report that the Librarian abruptly refused, without condescending to assign any reasons, notwithstanding he had previously expressed an entire willingness to adopt any suggestions the Committee would propose. Thus the labors of your Committee to improve the Registration of Vital Statistics have been rendered futile. And we must still go on in the practice of a system so imperfect that statisticians everywhere regard the results as they are published by the State Librarian as almost valueless for any practical purposes, or as a basis for any estimates of rates of births, marriages, or deaths.

STATE BOARD OF HEALTH.

The Committee appointed to take in charge and further the interests of a State Board of Health before the Legislature, have

already reported to the President and Fellows the failure of their undertaking.

We desire only to call attention to the subject now in order to urge continued effort in the same direction. It cannot be that our Legislatures will continue indefinitely to be so obtuse that they cannot or will not see the advantages which such an institution is capable of conferring upon the citizens of the State.

Already fifteen States of the Union have established such organizations within their borders, and surely Connecticut cannot long consent to be a laggard in adopting one of the most essential elements of modern civilization. Even Colorado, the very last State in the Union, and not yet in its second year, has her State Board of Health in full operation. Only last week the writer received the first annual report of its work, which was ably written and would do credit to an older institution. Upon the medical profession of the State rests the responsibility of this undertaking. There is no real cause for discouragement, and the effort must not be abandoned.

Respectfully submitted.

C. A. LINDSLEY,
W. A. M. WAINWRIGHT,
H. W. BUELL,

Committee on Matters of Professional Interest in the State.

HARTFORD COUNTY.

Dr. C. A. Lindsley, *Chairman of Committee on Matters of Professional Interest in the State.*

Dear Sir:—I have the honor to report that the health of Hartford County, during the past year, has not been interrupted by any serious epidemic. The apprehended sickness, that should follow the long period of unusual heat, did not appear.

A few of the Centennial pilgrims fell into a typho-malarial condition, on their return, but did not, with hardly an exception, yield to fatal issues.

Scarlet fever has prevailed in some localities, marked by an extraordinary mildness of type, and further marked by the following somewhat remarkable feature, viz.: the appearance of rheumatism with swollen joints, either before, or coincidently with the irruption of the disease itself. Can this circumstance be explained by the fact, if it is a fact, and I believe it is, that rheumatism has been more prevalent than usual the past seasou.

Diphtheria has appeared sporadically, either in isolated cases, or in groups of cases, in the same household, both in city and country; and in all cases, directly traceable in origin to filth in some one or another of its manifold manifestations; an amazingly fearful and responsible fact, recognizing which, some future humane and magnanimous legislature more far-seeing than any of its bliuded predecessors, will give to the waiting people of this State a Board of Health, that shall snatch for them glad life out of this pestilential death.

Typhoid fever, by general observation, has not prevailed to the same extent as last year. Its mortality record fell below that of last year by nearly thirty per cent., and that of 1873 by nearly forty per cent., but it exceeded that of 1870 by twelve per cent., while it equaled that of 1866, teu years ago.

Malarial diseases are, undoubtedly, becoming more frequent. Intermittent and remittent fevers are recognized as quite common diseases, while a multitude of ailments of malarial origin, and complications, are vexing the populace iu all directions.

During the past two or three months, there has been a perplex-

ing and wide-spread seizure, apparently malarial, simulating peritonitis, and other kindred affections of the abdomen, not often fatal, but grave in character, and awakening always serious apprehensions.

The unprecedented frequency of bites from dogs supposed to be free from rabies, should be noticed as an interesting fact in current medical history. I enclose several cases of interest.

Very truly yours,

L. S. WILCOX,
Reporter for Hartford County.

HISTORY OF DELIVERY IN A CASE OF DOUBLE VAGINA AND BICORNAL UTERUS.

L. S. Wilcox, M. D., Hartford.

A primipara, three months in gestation, sought consultation, for a suspected malformation of the vagina.

An examination disclosed the vagina divided into two equal parts, by a longitudinal and perpendicular septum, extending from its solid attachment to the uterus, nearly to the vulva. At each upper extremity of this double vagina, was a uterine horn or neck, each horn similar to the other in appearance, equal in size, and having an apparent os. It was not possible to determine by the finger, whether both, or only one, was pervious. A further examination, in her condition of gestation, was, for obvious reasons, deemed unadvisable. At her confinement, at full term, the first examination discovered a slight dilatation of the left horn, and a toe presenting, but the right horn impervious, the apparent os being expanded into a marked depression, the size of a silver half dime, and the dividing septum much enlarged and thickened, and feeling much like the wall of the uterus, immediately after delivery.

A second examination, twenty minutes later, detected the cord prolapsed, beside the toe, and the depression in the right horn, the size of a silver dime, but fading out.

A third examination discovered the cord down several inches, and its pulsations very slow and weak. It was carefully replaced into the uterus. The depression in the right horn had faded out, and the septum was enlarging and pressing to the right, and retracting upward.

At a subsequent examination soon after, the cord was more prolapsed, quite cold, and its pulsations almost arrested. I thereupon determined to replace the cord and retain it in the uterus, neath my hand, and at the same time, while preventing the further descent of the child, to

dilate the uterus sufficiently to afford easy passage to the fœtus, and then deliver rapidly, hoping thereby, to save its life. This course was pursued, the child saved, and no accident to the mother.

At a subsequent natural confinement, the old conditions were found undisturbed.

GASTROTOMY IN A CASE OF RUPTURED UTERUS.

M. Storrs, M. D., Hartford.

I was called, February 12th, 4 P. M., to an Irish woman, in labor with her eighth child. Found her in great suffering; anxious look; hurried breathing; pulse 160, small and feeble; in a word, with every appearance of having met with some great shock. Making a vaginal examination, no child was to be found, either in the vagina or in the uterus. The latter organ was as though delivery had just taken place. Placing the hand upon the abdomen, the limbs of the child could be easily felt under the integuments. The womb was well contracted, and a hasty examination did not detect the place of rupture. Was informed by the family that she had been in labor for two days, and that the attending physician had applied forceps at ten A. M.—six hours previous to my visit. The instruments slipped; the child receded; patient felt something give way; pains ceased from that time. Leaving her to get other instruments, the doctor on his way home met with an accident, and did not return.

I regarded the case as perfectly hopeless, from the nature of the accident and from the great shock to the vital forces,—yet, wishing to give her every chance possible, a consultation was held at once, and Drs. Jarvis, Chamberlain, and Knight, were unanimous that an operation should be done. An incision was made in the median line. We came upon the contracted womb. The child was to the left of the uterus, along with the placenta and a large quantity of clots. The upper and anterior surface of the uterus was brought plainly into view, but the rupture was not seen, probably it was in the lower, or posterior part. The peritoneal cavity was sponged out and closed, as in ovariotomy. She was greatly relieved by the operation; no pain; no vomiting; pulse slower (130), and fuller. Every indication through the night and the following day, was favorable. Nourishment, stimulants, and opium were well borne, but in the evening she began to fail, and died early the next morning, from continued shock. No post-mortem could be had. *Remarks.* The cause of this appalling accident is due generally to some abnormal structural condition of the womb, to its violent action in overcoming some opposing obstruction, or to the unskillful manœuverings of the obstetrician. In this case the uterus seemed healthy, and the pains had

not been excessive. When the instruments slipped, the rupture had occurred, for something gave way; the child left the womb; pains ceased.

What is the appropriate treatment in such cases?

1st. Such a case may be abandoned—that is, left to nature.

2d. The child may be seized, turned, and delivered through the rent, as by the forceps, if the head is within reach.

3d. Gastrotomy.

Each method has furnished instances of recovery. In our case, we had to resort to either the first or the third method. The second was impossible, since the uterus was contracted, and the rupture was not found.

In a full report of such cases, exceeding four hundred, by Dr. Trask, published in the American Journal of the Medical Sciences, the result is as follows:

Gastrotomy lost 24 per cent. Turning, perforation, &c., lost 68 per cent. Abandonment to nature lost 78 per cent.

These statistics are in favor of gastrotomy, to either of the other two methods, as three to one. We are not advocating this perilous operation, but at the same time we believe that it adds very little to the shock or danger.

A CASE OF AMPUTATION OF BOTH LEGS—MISCARRIAGE—RECOVERY.

W. A. M. Wainwright, M. D., Hartford.

A. C., a young, robust, and well-made Irish girl, twenty-four years of age, unmarried, of medium height, and about one hundred and twenty pounds weight, was run over upon the evening of the 22d of March, 1876, by an engine upon the New York, New Haven & Hartford Railroad. The engine passed over both feet. She was removed to her residence, where I saw her about an hour after the accident. I found her lying in a small room, upon the ground-floor of a tenement-house in the Irish quarter, where the worst possible hygienic influence prevails. Her room opened out of the kitchen, which was but two or three feet above the sidewalk, and directly over a damp and unwholesome cellar, the communication between the two being made complete by a large opening in the floor in front of the sink, caused by the rotting away of the boards. No worse place could, I think, have been found for the performing and subsequent treatment of an amputation. One of the gentlemen present at the operation, made the remark, that it was hardly possible for a wound to do well in such a place. I lay stress upon this point, and may as well make the statement here, that contrary to all rule, and notwithstanding the

bad hygienic influence, and the most unfavorable prognosis, the case did well. I have never in my surgical experience, seen an amputation do better, or a wound heal more kindly, than did the stumps in this case.

Upon examination, the girl was not found to be suffering much from shock. The right foot and ankle were found completely crushed, the foot hanging by a few tendons and a small portion of integument. The hemorrhage was profuse. The foot was severed by a few cuts with the scissors, and the hemorrhage from stump controlled with cotton wool, compress, and bandage. There was no appearance of bleeding from the left foot, upon which was a tight-fitting gaiter (elastic bands at sides), the only injury to which was a small rent upon the instep. The foot, however, gave the appearance, through the shoe, of being dislocated backwards at the ankle joint. When the shoe was taken off, the tarsus was found to be crushed almost as badly as in the case of the right foot. It was remarkable that so severe an injury of the foot could have been produced without causing any greater laceration of the shoe. With the assistance of Dr. Storrs, the right leg was amputated at the junction of the middle and lower thirds, on the evening of the occurrence of the injury. The left leg was amputated at the same point, the next morning. Esmarch's bandage was used at the second operation, and to it mainly I attribute the recovery of the patient, as the hemorrhage amounted to nothing at the second operation, while it was considerable at the first, when the bandage was not used, not being at hand. To add to the complications of the case, it was discovered that the girl was six months pregnant, a fact with which the family were found to be unacquainted. She complained of severe pains in the back shortly after the last operation, and early on the following morning I was summoned, and found that she had had a miscarriage. The fœtus had been expelled and removed by an attendant, but the placenta was retained. I administered chloroform and removed it. The hemorrhage was considerable. I omitted to state that after the amputation, compresses and bandages were tightly applied to the stumps, in order to more thoroughly guard against any further loss of blood. These, however, were removed upon the fourth day, and from that time the stumps were treated after the "open method." A thick comfortable was tightly rolled up and placed under the knees, so that the stumps were entirely dependent, and there was no hindrance to the perfectly free escape of the discharges. The stumps were daily syringed out with carbolized water, and dressed with balsam of Peru and carbolized dressings. Due attention was had to the constitutional condition, tonics, etc., being exhibited as found necessary. For a few days after the operation she was very weak, and I had little hope of her recovery, but after that time she began to improve, and progressed rapidly towards recovery. She had no trouble following her miscarriage. The stumps, as I have stated before, healed most kindly, there being no excessive inflammation nor any collections of pus. A pair of artificial legs were made for her by D. DeForest Doug-

lass, of Springfield, and were fitted in the July after the accident. Since that time she has had several slight drawbacks, once in the formation of a small abscess above the left knee, and several times from slight attacks of inflammation of the stumps, caused by the pressure of the artificial legs. There was never any discharge of bone. At the present date (April, 1877), the girl walks about with comparative ease, and is able to go up and down stairs without trouble. She still uses a cane, but it is not necessary, except that she lacks confidence to do without.

Recoveries from amputation of both legs are of sufficiently common occurrence as hardly to warrant the detailed account of an ordinary case. I think, however, that this girl showed a very great recuperative power; and that the case may be set down as one of "remarkable recovery," when the circumstances against which she had to contend are taken into consideration. 1st. The nervous shock of the injury itself. 2d. The loss of blood at the time of the injury. 3d. The additional loss of blood at the time of the first operation. 4th. The miscarriage and its attendant hemorrhage. 5th. The miserable hygienic influences by which she was surrounded, and which of themselves were a sufficient cause for her non-recovery.

It may be needless, but perhaps it is proper for me to say, that I do not take the slightest credit to myself for the result in this case, for after the first few days (during which time I did not have the slightest idea that the girl could recover), I put the case into the hands of one of my students, who faithfully attended to it until the wounds were healed.

Next to her innate recuperative power, I think, as I mentioned above, that her recovery was due to the Esmarch's bandage, used at the second operation; for there is no doubt in my own mind that had she lost as much blood in the last operation as she did in the first, in addition to that lost before and at the time of her miscarriage, it would have turned the scale, and the case would not have been reported as a recovery.

The following letter from Mr. Douglass of Springfield, Mass., was written in answer to one sent to him by myself, asking for his opinion, (based on his long experience in the fitting of artificial limbs) upon these two points. 1st, What *length* of stump is best adapted for the *fitting* of an artificial limb, in order to give the patient the most useful limb possible? 2d, What method of amputation, (circular or flap) affords the *best* stump for the same purposes?

Surgeons do not, I think, as a usual thing, take these points sufficiently into consideration in their amputations; particularly the first, to wit: "What length of stump will best enable the patient to obtain the most useful artificial limb?" For the most part the rule laid down in the books, "to save as much of a limb, and

amputate as far from the *body* as possible," is followed on the ground that "every *inch* taken off greatly increases the risk to the patient." The rule is a bad one to follow, and should be abolished if we are to consider the future welfare of our patients; and the reason for it is, in the present advanced state of surgery, entirely groundless.

When by the use of modern surgical appliances, one surgeon has performed three successive amputations at the hip joint, within a few months of each other, as was recently done by Erskine Mason of New York, and with recovery in all of them, it is about time, in my opinion, to give up the idea that "another inch" is going to turn the scale against the patient.

In many amputations of course, the surgeon has no choice as to the "point of election," and is obliged to make a shorter stump than he would wish, but there are many others in which he can determine the point, and make the stump *shorter* than would be done if the rule was followed, and thus materially aid the limb-maker, and allow the patient to be provided with a very much more useful artificial limb. I am not aware that the subject has been looked at from the limb-maker's standpoint before.

In corroboration of Mr. Douglass' opinion concerning the method of amputating, I will quote from Gross' System of Surgery, Vol. I, p. 529. "During the sitting of the commission appointed by Surgeon-General Hammond, to report on the subject of artificial limbs, convened in New York, in 1862, upwards of a dozen manufacturers then present, unanimously assured me that stumps made by the circular operation are, as a general rule, in every respect inferior to such as are made by the flap method, that it is much more difficult to fit them with an artificial substitute, and that they are a great deal more liable to become chafed, irritated, and ulcerated. The results of my own observations strongly corroborated this statement. I have been at much pains, by visiting some of our military hospitals, to inform myself personally of the comparative merits of the two operations, and from all that I have witnessed, the preponderance is vastly in favor of the flap method. Dr. J. R. Levis, formerly in charge of the Government Hospital in this city, for the cure of bad stumps, bears similar testimony."

SPRINGFIELD, MASS., May 18, 1877.

W. A. M. WAINWRIGHT, M. D., HARTFORD, CONN.

My Dear Sir:

Your letter of the 25th ult., asking the result of my observations and experience in regard to the best length of stumps, also method of amputations to give the very best results in applying artificial limbs, came duly to hand.

I am glad to learn that surgeons are seeking information in regard to amputations with reference to the best application of artificial limbs, where the welfare of the patient is depending so much upon this point. This should be the leading thought in amputations with the medical profession, not only how skillfully can the amputation be performed, but how well the patient can be fitted for the duties and burdens of life, how well the chasm between the natural and the artificial can be bridged; how well the adjustment where the natural terminates, and the artificial begins.

The absolute rule laid down in surgery—in amputations always to save as much of a limb as possible, has had and passed its day of usefulness.

It had its origin in the earliest days of surgery, when an amputation was attended with much greater risk of life, than in the days of such great improvements in the practice of the profession. In the earliest days of surgery, previous to the application of artificial limbs, the loss of a member or *any* part of it, was looked upon by the patient as a *great* affliction, and he enjoined upon the surgeon to save as much as possible, as he feared both the *result* of the amputation and his physical appearance. It was a natural and spontaneous feeling, the growth of the surrounding circumstances.

While it may or may not be true, that the longer the stump in amputations, the less liable to fatal results, there are other considerations that should have weight and influence with the surgeon. If the saving of a life is desirable, life should be *desirable* after it is saved. If, through the great kindness and zeal of the surgeon he has saved the life of his patient, and has, at the same time, entailed upon him a condition preventing him from the enjoyment of the full or *partial* duties of life, he has succeeded in saving it, but full of bitterness.

An experience of many years with patients who have submitted to amputation, has revealed this important fact,—that the last and most absorbing thought of the patient previous to the operation, would find expression in, "Doctor, give me the very best stump to wear an artificial limb." Showing life a secondary consideration unless *made desirable*.

I will therefore suggest, as giving the best result to the patient, not only immediate but during the subsequent time, the artificial must co-operate with the natural member to perform the duties of life,—first, never to amputate through the joint. And my reasons are, the stump

is almost invariably thinly covered at the end, from necessity, the tissues surrounding those parts not being abundant, consequently the circulation is feeble, vitality at the extreme and much reduced, and excoriation from any cause thereby greatly retarded in healing, the propelling power in nsing an artificial limb is reduced in the same ratio that the stnmp is enfeebled or sensitive. Second, it is impossible to constrnct an artificial appliance that will so well supply the loss symmetrically, or will be nearly so durable, meeting all the requirements to which an artificial limb is constantly subjected, and never is so satisfactory to the patient.

Many limbs have been fitted to such amputations becanse they were presented for treatment and the patient walked well. But this proves nothing. We are liable to jump at conclusions. Compare these with leg or thigh amputations after three or five years' experience, and the result will be quite different from what wonld promise at first. Many cases result in a second amputation.

A young lady, patient of mine, residing in Quebec, came to me some years since for an artificial limb, stump, disarticulated ankle, one of the best of its kind I ever saw. Her first inquiry was, "have I the best amputation to have an artificial limb applied in the best possible manner?" I told her she had not. She immediateiy decided to return and have a secondary ampntation, at any poiut I wonld snggest. I fixed eight inches below the lower edge of patella as the best point. In due time she returned, showing a fine stump. I applied an artificial limb corresponding in symmetry perfectly with the natural one, which she has constantly nsed, greatly to her satisfaction and comfort, without the use of a cane. Another objection is, the space occupied by the remaining portion of joint is reqnired for a properly constructed artificial joint; both cannot occupy the same place.

Nearly the same objections will apply to extremely long stumps, either of leg or thigh, feeble circnlation at the end, low vitality, danger of excoriation, and therefore slow process of healing. Very long stumps are liable to swell at the end, and the artificial limb is required to be made larger at this point to meet this difficulty. After passing eight inches below the lower edge of patella, we make no use of a stump, either for bearing or propelling power for the artificial limb.

Therefore, as considerations of utility, safety, usefulness, and symmetry in the artificial limb, long stumps are undesirable. The best length for thigh amputation is ten inches below the body, measuring inside. In all cases retain perfect use of the joints. Of course the conditions of injury or disease determine shorter stumps, but the rule stands the same, the more nearly it can be conformed to, the better the result. In cases of anchylosis of knee joint, flexed at right angles, where amputation is performed, the end of stump should fall one inch back of a line of the thigh. Such cases are well adapted for an artificial limb with the bearing on the knee. In these cases a greater length of stump is

unnecessary and undesirable, as the perfect outline of the patient when dressed would be broken by a protruding stump.

The most desirable method of amputation, giving the best stump capable of exerting the greatest power of locomotion, leaving the tissues the more nearly in their natural position and condition, and the least liable to injury or excoriation is the antero-posterior, double flap. This brings the cicatrix over the end of the stump, where it is protected from any pressure in wearing an artificial limb.

It will be proper to remark in connection with this subject, that when a stump has become well healed, to put it in the best condition and adaptability for the use of an artificial limb, it should be kept constantly bandaged, as tightly as can be comfortably worn, for three or four weeks. This renders it more conical in form, and better adapted to sustain the weight of body on the artificial limb.

These brief observations and suggestions are the result of, and are based upon a thorough practical experience of nearly thirty years in making and adjusting artificial limbs to every form of and condition of stump.

I am, very truly yours,

D. DeFORREST DOUGLASS.

PISTOL-SHOT WOUND OF FOREARM—SECONDARY HEMORRHAGE—LIGATURE OF ARTERIES—RECOVERY.

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

J. S, a short, thick-set, muscular Irishman, of decided intemperate habits, forty-nine years of age, five feet five inches in height, and one hundred and sixty-five pounds in weight, was, while standing upon the steps of his house (about three feet above the sidewalk), shot in the forearm, by a man standing upon the sidewalk directly in front of him. The weapon used was a small Smith & Wesson "*seven-shooter*." The wound was received upon the evening of Christmas Day, and I was called to see the case upon the afternoon of the day after, December 26, 1876. There was but slight hemorrhage at the time the wound was received. Upon examination there was found a pistol-shot wound about the size of a pea, situated upon the median line of the anterior aspect of the right forearm, about two inches below the flexure of the elbow joint There was slight redness in the neighborhood of the wound, and some pain, which was more marked upon pressure over and just above the inner condyle of the os brachii. There was a slight sanguineous oozing from the wound, but no marked hemorrhage. Upon introduction of the probe, the course of the wound was found to be first directly

backwards to the depth of about an inch, then upwards, inwards, and slightly forward, for the distance of about four inches, passing above and to the inner side of the internal condyle of the os brachii. A lengthy search failed to discover the ball by means of the probe, consequently no further attempt was made. Cold water dressing was ordered. On January 6, 1877, he presented himself at my office, with the report that the arm "had not done well," which, upon examination, was found to be the case. The entire forearm was much swollen and indurated, the wound, which was considerably larger than before, looked sloughy, and gave exit to unhealthy looking pus; and there was a decided erysipelatous inflammation upon the entire surface of the forearm, being more marked in the immediate neighborhood of the wound. The outlet was perfectly free, and there was no collection of pus, except in the track of the ball. This state of things I attributed to his alcoholic diathesis. A poultice was ordered for the arm, and an iron tonic was advised. I did not see him again until the 12th of the month (the 18th day from the receipt of the wound), upon which day I was hastily summoned about seven o'clock in the morning, on account of sudden and severe hemorrhage. Upon my arrival I found that the bleeding had ceased, the wound being filled with a clot. As to the quantity of blood lost I could form no estimate, as the floor which had received most of it had been washed. It was doubtless considerable, but not sufficient, however, to produce any serious constitutional effects. A bandage, compress, and tourniquet were applied. 9 A. M., Drs. Storrs, Jarvis, and Chamberlain in consultation. The patient was etherized by Dr. Chamberlain. The appearance of the arm was very much the same as at last note. The general appearance of the man (which has not been spoken of before), was very bad, so much so as to excite the remark, that he must have Bright's disease. There had been no examination of the urine made. It was decided by the consultation to lay open the track of the bullet, find and ligate at the bleeding point.

Esmarch's bandage was applied, and an incision about three inches in length was made over the course of the wound. After a somewhat tedious operation, rendered so by the extensive infiltration and sloughy condition of the tissues, the artery was laid bare, and the bleeding point discovered. It proved to be upon the outer and under side of the brachial artery, less than half an inch above the bifurcation, and consisted of a ragged opening, involving about half the wall of the artery, and about the size of a buck-shot. The artery was ligated above and below the opening; a ligature was also applied to both the ulnar and radial arteries, and also to the interosseous, as that artery in this instance was given off very near the bifurcation. When the Esmarch's bandage was taken off, the hemorrhage was quite severe; it was mostly venous, however, although a few ligatures were applied. The wound was brought together by sections, and compress and bandage applied to control the hemorrhage. They were all, however, removed in a day or two, and

from that time the wound was treated after the "Open Method," carbolized dressings being used. I will here say a word in regard to Esmarch's bandage, the use of which in this case was of such material service, for with the ordinary amount of bleeding the operation would have been more tedious and difficult than it was. I have used the bandage in a good many operations, and in fact I would always use it where I can. I have never seen any ill effects from it, and I consider it to be of incalculable service to the surgeon. It has been well said that "Esmarch's bloodless operation is to the surgeon what ether is to the patient," being oftentimes as great a comfort to him as is ether to the patient.

For a week or ten days the patient did badly. He became rapidly reduced in strength, and suffered much from vomiting, severe headache, and pain in the arm. He had no chills, however. The wound, in the meantime, became sloughy and almost gangrenous in appearance, with an abundant discharge of sanious matter. Each point where the sutures had been became the seat of a small slough. The whole arm was very much swollen and inflamed, and looked about as badly as an arm could look and maintain its vitality. The wound was thoroughly cleansed twice daily with a carbolized solution, after which carbolized dressings were applied. The lotio plumbi et opii and carbolized poultices were applied to the arm. Under this local, and a very decided tonic and sustaining constitutional treatment, the grave symptoms by degrees gave way; the sloughy portions of the wound were thrown off, healthy granulations sprang up, the constitutional condition improved, and the patient finally made a good but very tedious recovery.

Some days after the operation, a good-sized and very painful abscess formed in the ball of the thumb of the injured arm. It was slow in forming and tedious in healing after being opened, but it was not attended with any sloughing of tissue. The median nerve was to some extent injured during the operation, as he afterwards complained of some numbness in the thumb and first and second fingers. I omitted to say that all the ligatures came away by the seventeenth day, and that by the end of two months the wound had entirely healed.

At the present writing (April 24, 1877), the patient still complains of slight numbness in thumb and fingers, but it is by no means as great as at first, and is gradually wearing away. At times he has very severe pain in the arm, but that also is not as severe as at first. He has excellent use of his arm, can lift and carry with it quite as well as ever, but suffers some inconvenience and pain upon lifting the arm higher than his head. I omitted to state that the ball was not discovered at the time of the operation or during the healing of the wound. It has not as yet given any indication of its presence.

NOTE.—May 14, 1877. The patient whose case is recorded above, died this morning at five o'clock, from brain lesion concurrent with an attack

of facial erysipelas. I was called to see him yesterday morning, and found that on Friday last, he complained of some burning of the nose, and told his wife that he was afraid he was going to have an attack of erysipelas, from which he had suffered several times before. On Saturday morning he had a severe chill, and his face and head began to swell rapidly. By night he became delirious, and was so when I saw him on Sunday morning, at which time he was in a very weak and critical condition. His face was very much swollen, the nose and upper part of the cheeks being bereft of epidermis, and bullae having formed on othe parts of his face and neck. His symptoms grew worse during that day and night, and he died at the time mentioned above. I was fortunate in being able to obtain permission to examine the arm and endeavor to find the ball. The examination was kindly made for me by Dr. Knight, of this city, assisted by Dr. Coogan. A thorough attempt was first made to *feel* the ball through the integument and muscles of the arm, but it was entirely unsuccessful. An incision was then made over the center of the joint, a little outside of the point of entrance of the bullet. The incision was carried through the brachiales anticus muscle, down to the bone, and proved to be a very fortunate one, for upon introducing the finger through the muscle just above the joint, the ball was found. It was lying upon the anterior border of the os brachii, about half an inch above the coronoid depression. How far, if at all, it had moved from its original position could not be told. The ball was conical in form and weighed twenty-eight grains. It had not injured the bone, nor struck forcibly against it, as its original shape was retained. The result of the examination proved that the ball might have been found by a little more diligent search at the time of the operation. But it was the general supposition at that time that it had gone further and lodged somewhere in the muscles, perhaps of the back of the arm, and on that ground it was not thought advisable to make an extended search. Up to the time of death, there had been no indication of the whereabouts of the ball. He always complained, however, of pain upon flexing the forearm, which was attributed to the cicatrix and the hardening of the tissues. This pain may possibly have been due to the presence of the ball.

PISTOL-SHOT WOUND OF THE BRAIN—BULLET NOT REMOVED—RECOVERY.

Geo. C. Jarvis, M. D., Hartford.

During the night of March 21, 1877, Mrs. G. aged 20, born in this country of Irish parents, was wounded by a pistol ball, caliber 32, on the left side of the head, about an inch and a quarter in front, and a

little above the upper point of the left ear, the ball passing in through the skull.

The wound was examined by a probe, and I detected an orifice in the bone of the skull immediately below the site of the external wound; the probe not being pushed any farther than to satisfy me that the ball had entered the brain.

When I first saw her, the patient was lying on a bed on her right side, covered by a profuse discharge of blood—moaning and uttering incoherent cries, and wholly unconscious—pupils much dilated, particularly the one of the right eye; pulse somewhat variable, being about 100 beats per minute; there was occasional vomiting.

The patient was properly washed, and left for the night under the care of a nurse with directions to apply cloths wrung out in warm water, as often as once in fifteen or twenty minutes.

March 22d, 9 A. M. Found the pulse 58, temperature 98⅘, and the respiration sighing, she still being unconscious. At the orifice of the wound there was material which I believed to be brain substance, but the quantity being so small I did not feel sure, and therefore to satisfy myself removed it with the end of a probe.

This was subsequently examined under the microscope by Dr. W. T. Bacon, and pronounced brain substance. For the four following days the symptoms continued the same. No medicine or nourishment was administered, and the local treatment was continued from the first. On the morning of the fifth day, signs of consciousness appeared; she then complained of excruciating headache and paralysis both of the sensory and motor nerves of the right side from the mamma down. At this time I administered cathartics, but did not succeed in securing evacuation of bowels until the third day following, and then after administering three drops of croton oil; after which she took bromide of potassium in 20 grain doses, every three hours, and nourishment in small quantities, beef tea or milk were allowed. After this the local treatment consisted in keeping the external wound open allowing a slight purulent discharge, which wholly ceased about the 8th of April. From this time the headache and paralysis gradually disappeared. I saw her for the last time April 11, when she had, to all appearances, convalesced. The case is reported—first, as showing a remarkable instance of the comparatively slight effect of a very serious and unquestionably penetrating wound of the brain—secondly, on account of the paralysis being limited to the right side of the body from the mammary gland down.

LITHOTRITY.

Mr. H. aged 45, examined January 7, 1877, detected what I believed to be two calculi in the bladder. After nine operations with the lithotrite the two calculi were wholly removed The features of interest in this case are, first, the existence of two kinds of stone in the bladder at the same time—one being the hard or oxalate of lime, the other the

phosphate of lime. Secondly, the effects of no one of the operations for crushing were sufficiently painful or unpleasant as to enable me to confine the patient over twelve hours after each attempt, he returning to his business in spite of my remonstrances, and urgent requests not to do so; each time stating very emphatically that he felt no unpleasant effect. A somewhat marked contrast between it and the operations for lithotomy.

Mrs. C., aged 28, phosphatic calculus, size of a pigeon's egg, removed with the lithotrite with one operation, without destroying the integrity of the stone—stone being seized in its short diameter, was slowly but firmly withdrawn by steady traction.

In consequence of dilatation of the urethra there was incontinence of the urine from paralysis, due to the stretching of the sphincter of the bladder, which remained, however, only about forty-eight hours.

SYPHILITIC HYALITIS.

W. T. Bacon, M. D., Hartford.

Mrs. E. B., age 32, native of Connecticut, consulted me January 17, 1877, for loss of sight in her left eye. She gave the following history Ten years ago while pregnant, during the last month, she suffered greatly from sore throat and mouth, lasting after the birth of the child, in all about seven weeks. During a part of the time she was unable to swallow solid food, but the sores were most numerous on the mucous surface of the lips. The baby lived four months, and during that time suffered continually with sores about the genitals and on the nates. There was also a sore on the nose. After the death of the child, the attending physician told the mother that both herself and child had been poisoned with syphilitic virus, by her husband. After the healing of the mucous patches, for eight years she was apparently free from any syphilitis taint.

Two years ago, while walking on the street, she noticed dark bodies floating before her eyes, but at that time paid little attention to this phenomenon.

About a year since, one morning she discovered that she was blind in the left eye, which condition continued unchanged until I saw her January 17th. On testing her vision she was found to be able to count fingers at three feet with the left eye, the right having a vision of $\frac{15}{30}$.

The eyes externally appeared normal, both irides contracting readily under the stimulation of light. A weak solution of atropine was used to facilitate an examination with the opthalmoscope. With this instrument the fundus of the left eye could not be seen, but numerous dark bodies were discerned floating in the vitreous. The fundus of the

right eye appeared slightly hazy. A diagnosis of syphilitic hyalitis? was made, and the patient put on hyd. chl. coros. and pot. iod., with London smoked glass to protect the eyes from the light. Jan. 31st, patient returned with a vision of fingers at four feet in the left eye. Heurteloup's leech was applied to the left temple, and the other treatment continued. Feb. 10th, the patient could now count fingers at eleven feet. Feb. 23d, fingers could now be seen at fifteen feet, and the large letter of the test type. At this time, pills of protoiodide of mercury, gr. $\frac{1}{4}$ t. i. d., now substituted for the mixture, as the latter disagreed with the patient's stomach. March 15th, vision $\frac{15}{100}$. The patient had neglected the direction to stop the pills when the teeth became tender, and was in consequence slightly ptyalized. Ordered medicine stopped, and gave a wash of pot. chl. for the mouth. April 21st, vision is now $\frac{20}{70}$, ptyalizm gone, and she can read Sn. No. 4. (ordinary sized print.)

With the opthalmoscope the fundus is now seen for the first time, and there appears no evidences of choroiditis. The case is still under observation. The patient states that for three days during the treatment, she could see as well with the left eye as before her blindness. This case is reported as being interesting in two particulars; first, in the length of time between the early manifestations of syphilis and the eye trouble, a period of eight years. Second, the fact of the eye being affected with hyalitis uncomplicated, which is not the rule; hyalitis complicating choroiditis, irido-cyclitis, glaucoma, &c. is quite common; Wells and Stelwag say that idiopathic hyalitis may occur, but very rarely. Macnamara denies that there is any such disease as simple hyalitis. Dr. Noyes of New York relates a case in a pamphlet on "Syphilis of the Eye," in which eight weeks after an iritis, and one year after the primary affection the left eye became suddenly blind from opacities in the vitreous, no external hyperæmia of the globe existing. The fundus could not be seen. Six weeks after the vitreous cleared up under appropriate treatment. At this time the fundus could be clearly seen and there was no choroiditis. He says a case precisely like the above is not often observed, but a process slower in development and less in degree, is a not rare effect of syphilitic poison." The case related would come under the latter head.

HYDROPHOBIA.

W F. Parsons, M. D., Enfield.

Leila E. Davis, aged (May 13, 1877,) three years three months and fourteen days, was bitten during May, 1876, by a male black-and-tan dog, upon the finger. As the dog did not manifest any symptoms of

sickness at the time, no attention was paid to the wound, it being a slight scratch, and healing in a few days.

It is now recollected that the dog was taken sick about one week after the occurrence of the bite, when he lost his appetite, appeared stiff in his legs, and sought retirement. These symptoms continued for a few days and he recovered, manifesting no marked symptoms of rabies, and lived apparently healthy until May 13, 1877, when he was killed.

About May 1, 1877, the little girl above named was noticed to be more irritable than usual, and in about a week afterwards began frequently to sigh or sob when any sudden motion was made near her face.

During the night of Friday, May 11, she was restless, started suddenly out of sleep, and was somewhat feverish. These symptoms were attributed by the parents to indigestion, the child having eaten some raisins during the previous evening.

The child awoke at nine o'clock, Saturday morning, complaining of being sick, of sore throat, and of pain in the legs; drank one swallow of milk but refused more, because it hurt her, she said; refused to eat for the same reason.

At noon she tried to swallow, but cried out after making the effort and refused to take food and drink after the first attempt. At night, at supper, the same effort was repeated and the same result followed.

After supper, about seven o'clock, she complained of being thirsty, and went as usual to the pump for water. She took one swallow from the dipper, and immediately cried out, threw down the dipper, and clasped her throat with her hands, her face at the same time assuming an expression of great anxiety.

I was first called to see her soon after this event, and on examining the throat discovered slight congestion of the mucous membrane of the pharynx.

There was considerable nervous excitement, a pulse of one hundred and eighteen to the minute, some heat of skin. The voice was somewhat hoarse.

At ten o'clock, P. M., the patient was still feverish, pulse one hundred and twenty per minute, perspiration perceptible. The nervous excitement was marked. She was easily startled by noises or motions made near her. She seemed to be on the alert for any change in the position of persons or things about her, evidently fearing the effect of any motion occurring near her. The sighing or sobbing spoken of above was especially noticeable at this visit. Any rapid approach to her bedside, or movement of the bed-clothes about her head, was followed by a sudden, rapid inspiration and a pleading request to stop such movements. Accompanying this was considerable restlessness. The drinking of water had been complained of as being difficult, and milk was substituted. This was taken with much more ease, and in such a manner as

to give rise to the supposition that if only bland liquids were used for drink the difficulty in swallowing would be overcome.

The swallowing of the milk, however, at this time, was accomplished evidently with a good deal of determination of the will, she having promised to swallow some milk if something she dreaded was not inflicted upon her.

She passed the night in a very restless manner, sleeping none until four o'clock A. M., but suffering now the same spasms of the throat, often without any apparent cause, which had previously been produced by swallowing or the effort to swallow. These occurred frequently through the night.

Efforts to sleep were interrupted by sudden screams, when she would rouse up, clasp her throat, struggle apparently for breath, and after perhaps a minute become gradually quiet, to be aroused in a similar way after an interval of fifteen to twenty minutes.

She swallowed a little milk during the night, taking one swallow at a draught, with much fear and trembling and very rapidly.

A very severe spasm occurred at five o'clock on Sunday morning, after sleeping for one hour, when, on calling for milk, she clutched the cup containing it with both hands and raising it to her mouth clinched it spasmodically with her teeth, screamed loudly, and clasped her throat wildly, then sank back upon her pillow apparently exhausted.

These spasms were painful to behold, and to describe them is difficult. During them, the whole face assumed a fearfully anxious and agonized expression; the eyes were widely open, the pupils dilated, respiration embarrassed greatly, opisthotonos more or less marked, according to the severity of the paroxysm, deglutition greatly impeded, if not entirely arrested.

At five o'clock A. M., chloral was administered in four grain doses every two hours, and chloroform inhaled in moderate quantity.

These modified the severity, or at least the frequency of the spasms, so that from seven until twelve o'clock, only four occurred. During the day the patient continued restless, with a rapid pulse, the spasms occurring more frequently after twelve o'clock, noon, and more severely also, in spite of an increase in the doses of chloral to eight grains each. Nothing was taken into the mouth during the day, except as it was forced, and only in spite of the spasms, which occurred often, without apparent occasion, during the afternoon.

The dread of water and liquids increased during the day, she evidently thirsting for drink, but fearing the effect of attempts to swallow.

When water was brought into the room during the afternoon, she, on the moment of spying it, crawled rapidly away from the direction whence it came.

The spasms were not only more frequent as the day wore on, but were longer in duration, and in some of them she frothed at the mouth.

Toward evening it became evident that her vital powers were soon to succumb to the fearful strain now bearing down upon them. Her hardest spasm occurred at seven o'clock P. M., when she wrested herself, after violent efforts, from the grasp of her father, who exerted much strength in his attempts to control her. After this she was more quiet, sank gradually into coma, and died at ten minutes to nine o'clock. There was no autopsy.

COMMUNICATION.

B. N. Comings, M. D., New Britain.

In the notch of the mountains between New Britain and Plainville, there is an artificial pond, some forty acres in extent, formed by hill and mountain streams, which are dry during the summer months. About three-fourths of this pond, with a marshy bottom, was left dry and exposed from the middle of June till frost came. You will remember that we had last year, a heated term of twenty-nine days, with an average highest temperature of 92°. This period commenced June 28th, I think. July 17th I saw four cases of intermittent. In ten days the number increased to forty cases. Before frost came, there were fifty-six cases out of a population of eighty in the vicinity of that pond. Of those who escaped in the families under my care, all used cinchona as a prophylactic. Besides the above, there were scattering cases of intermittent, which could not be traced to any particular local cause.

FRACTURE OF THE BASE OF SKULL.

Death 76 days from date of injury—Post-mortem examination.

W. T., aged 50 years, a stone-mason by occupation, was admitted to Hartford Hospital April 29, 1876, at 8 o'clock, A. M. While at work he fell from a staging, a distance of twenty feet, striking on his head. When admitted, one-half hour after the accident, the patient was in a comatose condition, bleeding from the ears, nose, and mouth, the cerebro-spinal fluid was also noticed oozing from the ears, the pupil of the left eye was dilated, complete hemiplegia of the left side, pulse 112 and feeble, respiration 22, temperature 101.

May 31. The patient has remained to the present date in a semi-comatose condition, pulse ranging from 58 to 120, temperature from 98 to 102.

June 15. Patient is now perfectly rational, appetite good, is able to be dressed and walk about the ward.

June 21. 4 o'clock, A. M., patient had a very severe hemorrhage from the right nostril, which has left him quite weak.

July 13. 1 o'clock, A. M., patient had another attack of hemorrha e from the nose, during which he died from loss of blood, 76 days from time of injury.

POST-MORTEM EXAMINATION, EIGHT HOURS AFTER DEATH.

Upon removal of the cranium, the dura-mater was found to be slightly congested, and there was quite a quantity of fluid between it and the arachnoid. Numerous adhesions were noticed between the two membranes, more especially marked on the right side, and near the base of the skull. Upon the anterior surface of the right anterior lobe of the brain, was found an abscess, which contained an ounce of pus. On removal of the dura-mater from the bone at the base of the skull, the cribriform plate of the ethmoid was found to be fractured quite extensively, and the orbital plate of the frontal presented two fissures extending from side to side and from before backward. There was a crack in the bone between the sup. longitudinal sinus and the frontal, and the vein was ruptured at this point which caused the hemorrhages from the nostril. The petrous portion of the temporal was slightly fractured.

UPON THE USE OF NITRITE OF AMYL.

R. M. Griswold, M. D., Plantsville.

Like many other of our comparatively new remedies, the beneficial effects of Nitrite of Amyl remain, many of them, to be yet discovered. My first experiments with it were made upon myself. I found that three or four drops inhaled upon a napkin, produced increased action of the heart, the pulse rising from about 70 to 85 or 90, throbbing of the carotids, flushing of the face, a sense of numbness, similar to that experienced upon inhaling chloroform, a tingling and pricking in the extremities, and, if continued for a sufficient time and in sufficient quantity, insensibility, lasting but a few moments, followed by slight headache. Ten drops produced insensibility in a small dog in four minutes, lasting about fifteen minutes, and five drops, administered internally, produced an insensibility resembling death, the action of the heart and the breathing being scarcely discernible. Twenty drops, internally, killed him.

My first experience with it in practice, was in a case of epiliptiform convulsions, in a child of two years. Under the influence of two drops inhaled, the convulsions ceased almost immediately; returned again in an hour, when three gtt. were administered, and the convulsions

ceased entirely with no return. I next used it in a severe case of facial neuralgia. The patient had been without sleep for nearly seventy-two hours, and in intense pain. I administered five drops on a handkerchief: the pain ceased in less than ten minutes, and in twenty minutes the patient was asleep, and slept for six hours. The patient was cured at the end of six days by use of phosphorous, grs. $\frac{1}{100}$, and nux vomica, grs. $\frac{1}{3}$, four times daily; but during this time, whenever pain was very severe, three or four drops of the nitrite of amyl always produced rest, and partial if not entire cessation of pain. In a case of severe toothache, one drop, on a little cotton was inserted in the cavity, and covered with a little wax, the pain ceased in a very short time. I have used it also in angina pectoris, by inhalation, with the very best of results, the spasms being almost instantly arrested. I have now under my care a case of schirrous cancer of the stomach, in which I frequently use a few drops of amyl to allay the pain, when it is unusually severe, and the condition of the patient is such as to demand rest and sleep. Owing to the increased action of the heart under its use, I should judge that it might be advantageous in the continued fevers as a temporary stimulant, care being used not to carry it too far. I have never had an opportunity of using it in this way. My experience in its use has been limited, but I believe it is capable of being made of great practical benefit to the profession.

SPASMODIC STRICTURE OF THE ŒSOPHAGUS.

C. W. Chamberlain, M. D., Hartford.

The harmony between the two sets of muscles, the voluntary and involuntary, which are concerned in swallowing, is not infrequently disturbed, and by this lack of concerted action the act prevented. Some persons are unable to swallow if their attention is in any manner directed to the act, while untroubled at all other times. The lack of a co-ordinate action results in a contraction of the œsophageal fibers below the bolus of food instead of above it, thus causing regurgitation. Why the irritation should be thus transmitted it is not easy to explain; the process is not entirely abnormal, however, as there is provision for reversed action of the œsophagus in vomiting. The perversion of function varies from slight peculiarities which prevent the swallowing of some particular article, to those cases where the contractions are so regular and obstinate that the possibility of sustaining life by gastric digestion becomes a serious one, or in extreme cases death even

ensues. Temporary cases, lasting several days, are recorded as resulting from irritating food or injury. A case came under my care recently, resulting from a severe choking received in a quarrel. The cause seemed to be rather reflex irritation from the larynx, as with the subsidence of the laryngeal congestion the difficulty in swallowing and regurgitation ceased, lasting about ten days. Reflex irritation from neighboring organs is a recognized cause, the tension upon pleuretic adhesions when the lung begins to expand, often causes spasmodic contractions of the œsophagus, as well as laryngeal troubles.

Spasm of the œsophagus so regular and obstinate as to prevent the swallowing of any but liquid food for months or years, in spite of the most skillful treatment, and so severe as to interfere seriously with alimentation, is not very infrequent, it more rarely occurs so obstinate as to produce death by starvation, unless accompanied by some central nervous lesion.

Hamburger divides spasmodic strictures into two classes:

1.—True œsophagismus, occurring in hysteria, hypochondria, and hydrophobia. This is tetanic in character, oftentimes painful, and does not require the attempt to swallow to induce, or even the sight of food or drink.

2.—Spasmodic stricture a true neurosis, the attempt causing contraction below the bolus of food instead of above, and regurgitation; the latter, to be characteristic, must occur within sixty seconds, according to Brinton, who ascribes a form near the cardia to dyspepsia.

Seney mentions two cases of spasmodic stricture lasting several years. Smith (Irish Hospital Gazette, 1874), relates four cases, one where the spasm recurred a few minutes after the action of an emetic, on the attempt to swallow food being made. Raynaud relates a case where dysphagia had existed from the eighteenth to the thirty-ninth year, in a girl who had never any symptoms of hysteria. Four years previously to his seeing her, the regurgitation was so regular and complete that starvation was imminent. Under a milk diet, however, she soon recovered flesh and strength. Similar symptoms again presented themselves, *i. e.*, became extreme, and threatened starvation, as liquid food, upon which the patient had subsisted for years, was taken with extreme difficulty, and often rejected. The attempt to explore the œsophagus revealed an obstacle to the passage of the bougie near the cardia; fearing rupture the effort was not prolonged. The next day, in the presence of the hospital staff, a full-sized bougie passed easily, the alternation of free and obstructed passage determined the nature of the difficulty—spasmodic

stricture. In spite of all treatment the patient gradually sank, and died soon after of starvation. The autopsy revealed no trace of organic stricture or thickening near the cardia. There was fusiform dilatation starting just below the pharyngeal end and extending nearly to the cardia, or just about the point where the bougie was arrested. The intestines were small and contracted from partial use for years, the small intestines to a cord smaller than the little finger.

Cases of a similar nature are recorded in periodical literature, the books generally dismissing the subject with brief notice.

The onset is ordinarily sudden, and often attributed to some substance which the patient affirms to be still in the throat, such as a pin, fish-bone, or the like. Pain, not a constant symptom, is usually referred to a point between the shoulders.

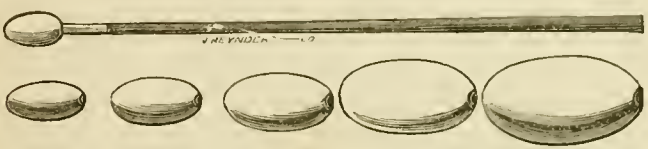
Spasmodic stricture may be confounded with organic stricture; paralysis with or without dilatation; dilatation in front of an organic stricture; a diverticulum; obstruction from aneurismal, or other tumors.

The diagnostic points are essentially, intermitting dysphagia; rapid onset; direct regurgitation; greater difficulty in swallowing solids than liquids; aggravation of the difficulty by fatigue or excitement; allowing the passage of a full-sized bougie after a gentle pressure for a few seconds, while in organic stricture the size must correspond with the amount of narrowing. Spasm more frequently occurs near the pharyngeal end, and rarely elsewhere except near the cardia.

Auscultation of the œsophagus, as described by Mackenzie, is very useful in doubtful cases. The stethoscope is placed on the back as nearly over the point to be examined as possible, and the patient directed to swallow a full mouthful; the instantaneous arrest and regurgitation are characteristic. In case of a diverticulum or sacculation, there may be a considerable interval before regurgitation, while in paralysis and dilatation there is none without vomiting; the normal sound made in a healthy œsophagus by the passage of food, which of course should be studied, is decidedly varied, and the rate of transmission tardier. Paralysis of the pharynx is revealed by the lack of contraction when irritated by contact with foreign bodies. Cancer and syphilis are eliminated by general history and symptoms; in the former, too, there is generally more or less frothy secretion. Tumors are sometimes indicated by deviation in the normal course of the bougie. There are exceptional cases when the onset is gradual; also when solids are more easily

swallowed than liquids; when the latter, especially if decidedly cold or hot, excite immediate spasms. The following cases have been under my care within the last five years, and as I have also had under observation two cases of organic stricture, one cancerous, the differential points were more clearly emphasized.

W. M., a miller, aged twenty-nine, consulted me in 1874, for a difficulty in swallowing, having lived on semi-fluid food for a year, ever since an attack of diphtheria. Since he was fifteen he had been troubled about swallowing meat unless hashed, or any tough articles, and was unable to swallow any object like a grape or even a currant. There was no history or evidence of syphilis, cancer, or phthisis, hereditary or acquired; the only element of heredity the fact of a similar trouble in his father. At the time I saw him he was living principally on mush and milk. On introducing a full-sized bougie it was arrested at a point just opposite the top of the sternum, but upon steady pressure it passed.* He was recommended to have the instrument passed often,



and for awhile came in three times a week, until trained to pass it himself and furnished with a proper instrument. Belladonna internally, atropine and strychnia hypodermically, and various local remedies to allay the hypersensitiveness of the nerves, were tried with no very decided result. Under the continued use of the bougies he has so far improved that in the morning he can take one meal of solid food, and occasionally at dinner also; the difficulty recurs as soon as he becomes fatigued or excited.

Mrs. J., aged thirty-nine, native of Devonshire, England, mother of five children, was referred to me February last, for difficulty in swallowing, which had become so extreme as to threaten death by starvation. She had subsisted on liquid food entirely for several weeks, and this, in connection with previous depression and exhaustion, had so reduced her that she was unable to leave her room, and scarcely to sit up. The care of a beloved daughter through a long illness of phthisis, the grief at her death, quickly followed by the sudden and unexpected death of another child, were severe strains both physically and mentally, and no doubt influential in inducing the peculiar nervous condition into which she fell; for some time before spasm and regurgitation occurred, fear or

*The cut is kindly lent by J. Reynders & Co., Fourth Avenue, New York, who have also given a pharyngeal curve to the instrument which facilitates its introduction.

dread was a marked symptom. She would awake at night fearing some calamity had befallen her household, and was obliged to go and survey her children before she could again compose herself to sleep. She imagined that a fish-bone had lodged in her throat, and dreaded to attempt to eat lest she should choke, and to see a pin lest she should swallow it and be injured. Her physician passed a bristle-probang, and found no obstruction or foreign substance. A few days afterwards, when eating dinner, she was suddenly attacked with spasmodic constriction and regurgitation of food, and afterwards with similar attacks intermittently, but growing more frequent, until she desisted from all attempts to swallow solid food, and at the time I saw her even liquids were taken with difficulty, and sometimes regurgitated.

Desiring to eliminate laryngeal trouble and to gain a little confidence before proposing to introduce the bougie in her nervous condition, a laryngoscopic examination was made, and a pale œdematous condition of the laryngeal membrane disclosed, but no ulceration or tubercular deposit, which might be anticipated somewhat from her family history. This was treated for a few days with some little relief. Examination with the bougie was then made, and disclosed spasmodic stricture near the pharyngeal end of the œsophagus, remitting about every third day, although not regularly, occurring at once, however, on the attempt to swallow solids. The general history and symptoms were confirmatory to the hypothesis of a true neurosis, while cancer and syphilis were easily excluded. The daily use of the bougie soon resulted in a decided improvement in swallowing, but when solid food to any amount was first taken the stomach rebelled, and for a few days rejected everything but morphine and very dilute brandy and water. She rallied slowly from this prostration, but lost little of the ground she had gained in the power of swallowing. Her improvement from that point has been steady and rapid, and for months she has had no restrictions as to diet. The nervous symptoms accompanying have yielded more slowly, and sleeplessness and unreasonable fear still remain to some extent.

In the treatment of these cases the most beneficial results are derived from the frequent passage of the œsophageal bougie. The addition of carbolic acid, extract of belladonna, or other agents to the unguent used upon the bougie is serviceable; also, the application of carbolic acid in pretty strong solution, nitrate of silver, or the mineral astringents carried down in a tube by brush or sponge and applied at point of spasm. Resort to external applications promises but little. Blistering and iodine are recommended as routine remedies by writers. The bromides, except to control accompanying conditions, are of no service. In the second of the cases related, all nervous sedatives were dispensed with. So far as constitutional treatment was concerned, the best results followed the use of the extract of malt and a supporting diet.

NEW HAVEN COUNTY.

To the Chairman Committee on Matters of Professional Interest in the State:

The last year in New Haven has been comparatively a healthy one, and although there has been nearly the usual amount of sickness, no epidemics have prevailed to a marked extent. During the summer of 1876, however, cholera infantum prevailed extensively during the heated term. Each season has witnessed the appearance of its peculiar diseases. Pneumonia has not prevailed as extensively, nor the type of the disease been so fatal as in previous years. Scarlet fever and diphtheria have occurred to a considerable extent during the winter months. The same absence of typhoid fever marks the past year as those immediately preceding, and it is a gratifying fact. In its place a fever partaking somewhat of the typhoid and the remittent types, shorter and milder, seems to have occurred.

New Haven has done little as yet in the important matter of school hygiene, and although it is believed that our public schools will compare favorably with those of other cities in this respect, yet it is evident that there exists the same pressing need of reform in this matter here as elsewhere

The matter of school hygiene is generally sadly neglected, especially in the country, and the scholars who attend the public schools are subjected to those injurious influences which arise from such neglect; the desks and benches are arranged according to the caprice of the builder, and graded in height and inclination without reference to the needs of the occupants and the direction of the light. In the older school-houses one still finds the old fashioned rude desks and ponderous wooden benches ranged around the room upon which the little children are obliged to sit, often without support for the feet or back. In many of the school-houses there is positively no provision made for ventilation except by the windows, the warming apparatus is defective, the fires poorly kept, and thus the scholars are subjected to the ill influences of sudden changes of temperature after a long walk through snow and rain perhaps, and often with wet feet. The air in these little square rooms in which is mingled the emanations from clothing and the breath, becomes sometimes positively stifling, and its

effects upon the children are shown by the breaking out of epidemics of colds, influenzas, and the eruptive diseases of childhood. This in addition by its slow poisonous influence, together with improper posture, develops a tendency to phthisical and nervous diseases, Potts' disease, and angular curvature of the spine. Defective illumination and improper arrangement of desks should not be overlooked as an important factor in the production of myopia and posterior staphyloma in the eyes of school children. Whenever they occur the scholar brings his book closer to the eyes to obtain a larger visual angle, the head is bent over the desk, an increased flow of blood to the head is induced, the fundus of the eye is congested, the lateral recti compress the globe in their efforts at greater convergence, there is increased tension of accommodation, the globe softens and becomes elongated, and staphyloma and short-sightedness ensue, which constantly progress while the vicious method of study is pursued.

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

New Haven.

MALARIA.

A. Beardsley, M. D., Birmingham.

I have praeticed in this place forty-one years, and until within the last three or four years there has been no chills and fever among us worthy of mention, except now and then a case or two, perhaps on an average not more than one or two a year, and these generally imported. For the last three years the disease has been steadily on the increase, confined mostly to the inhabitants within half a mile from the shores of the Housatonic River, for eight miles above the dam and say half a mile below it. Last year, ending April 1, 1877, not a single household, from the immediate neighborhood of the dam to a point eight miles above it on both sides of the river, escaped the disease. Whole families, including nursing infants, were down with it at a time, within the limits above mentioned. I have had during the last year at least two hundred well-marked cases, besides others in great numbers that were more or less malarial. The disease has assumed different phases, governed in many instances by constitutional predisposition to certain diseases; for instance, catarrhal affections, rheumatism, sore throat, etc., have been periodic and yielded to tonics. In three cases occurring in advanced plethoric patients, the disease has simulated apoplexia, the paroxysms of the tertian type, and quinine has been the remedy. One attack of this kind left the patient hemiplegic, but recovery ensued in a few days.

I have observed that individuals the most exposed to night air, and such as live and sleep on ground-floors near the river, have suffered the severest and most frequent attacks.

The first two years after the building of the dam the river was very high, and its shores, grassy and studded with wild vegetation, were covered with water far above what they have been for the last three years. There is no mistake as to the exciting cause of this disease in this vicinity, for as you recede from the shores of the river east or west, the cases are very sparse until they fade out.

REDUCTION OF PARTIAL DISLOCATION OF THE THIRD CERVICAL VERTEBRA.

By P. A. Jewett, M. D., New Haven.

A boy of about eight years of age fell from a height of some ten or twelve feet, striking on the posterior and upper part of the head. He was brought to my office within five minutes after the accident, with complete paralysis below the point of injury. There was a decided protrusion of the third cervical vertebra. No evidence of fracture. The boy was placed on a lounge, and while an assistant made counter extension by taking hold of the legs, I made gentle extension of the neck, my hands being placed under the chin and over the occiput. Very soon a slight "thud" was distinctly heard, and the patient was relieved. He walked from the office without difficulty, and subsequently had no unpleasant symptoms.

NEW LONDON COUNTY.

Dr. C. A. Lindlsey, *Chairman*
of Committee on Matters of Professional Interest, etc.:

My Dear Friend,—During the year I can recall no prevalence of any one disease. Occasional typhoid fevers, some pneumonia, phthisis as usual, and some cases of rheumatism, have interested me; the latter from the fact that salicylic acid was marked in its favorable results.

During the past week I have attended, for the third time, a case of labor, remarkable for a recurrence of mal-presentations. The patient was a well-developed Canadian-French woman, whose labor at this time I registered as her fourteenth. During the last three labors, the presentation has been of the shoulder with one or both hands protruding, and in each case requiring to be turned. I am informed that the labor preceding my attendance was of a similar character. At that time she was residing in Worcester, Mass., and was told that the birth of another child would terminate her life. In this case the child is dead, but the mother is well.

A case which excited some local interest, and obtained publicity through the newspapers, was one of remarkable hallucination. A boy twelve or fourteen years of age, working on a farm, was taken strangely ill soon after a hearty supper. At 11 p. m., when I first saw him, he was very delirious and greatly excited. An emetic quickly relieved him, and he passed the remainder of the night quietly. For the next three days there were at times a recurrence of these paroxysms of excitement, which were characterized by great fear of all about him. His actions now were like those of a dog,—barking, lapping with the tongue as if drinking, and shaking the sheets by his teeth with great rapidity. He shuddered at the sight and sound of water, but swallowed it with convulsive eagerness when it was pressed to his lips. We learned that at two different times he had been bitten by a dog (not rabid),—the first, eight years before; the second, four years. There were intervals while under care that our patient was perfectly rational, and appeared well. His excitement and hallucination disappeared under the use of nervines, and he continues to this day well.

Another case of great interest to me was of diphtheritic croup in a child less than two years old. Great difficulty of breathing,

membrane in the fauces, severe paroxysms of coughing, complete loss of voice, neither cry or laugh, giving audible sound, were the marked symptoms. Treatment—tonic, forced alimentation; topically, carbolic acid and glycerine, nitrate of silver in strong solution once or twice—perfect recovery in six weeks.

The working of our public schools is admirable, and ventilation so good that I cannot think the scholars suffer thereby. Neither do they seem to be over-taxed in their studies to the injury of their health. But a single case has occurred where I have recommended the withdrawal of a child from school; this was one of threatened chorea. My own children have not been in such good health as since attending the public school.

In conclusion let me add, that I have written this letter rather than shirk the duty assigned, but it will not add to the ability of your report. You can only say that you have heard from New London County, but nothing of importance.

L. S. PADDOCK, *Reporter.*

Norwich.

ORTHOPÆDIC SURGERY.

S. L. Sprague, M. D., Norwich, Conn.

When Stromeyer, of Hanover, in 1831, divided the tendo-achillis subcutaneously, he gave a wonderful impulse to the progress of orthopædic surgery. The practice is based upon the principle laid down by Hunter, that injuries in which the parts do not communicate externally, seldom inflame or suppurate. The subject was first fairly presented by Andry, in 1741, who collected all the available information concerning deformities, and first used the term orthopædy as applied to their correction. Dr. Little was prominent in England in directing attention to this branch of surgery; himself a sufferer from early childhood from club-foot (*equino varus*), hearing of the success of Stromeyer, he applied to him, and was treated successfully. He performed subcutaneous tenotomy in 1837. By his efforts the Royal Orthopædic Hospital was established, soon followed by others in most of the large cities. Since 1838, when founded, to 1876, 53,645 patients have been there treated, while it is estimated that 15,000 received gratuitous attendance for deformities last year in Great Britain.

Subcutaneous tenotomy was first performed in this country in 1834, by Dr. S. L. Rogers, while the first hospital was established in Philadelphia in 1867, and others soon followed. The mechanical appliances and discipline secured in such establishments are of inestimable benefit.

The causes of club-foot are various. Varus is due to a motor paralysis, and all forms, whether congenital or acquired, to perverted innervation. The cause of this defective nervous influence is unknown. The acquired form may be from several causes, as injury, disease, paralysis, injury to spinal cord. Prof. Sayre has published interesting cases of varus, from reflex muscular contraction, caused by congenital phymosis and adherent prepuce.

The pathological appearances of muscles and structures have been investigated, and the reparative process in human tendons, studied from numerous dissections, in various stages of repair. When a tendon is divided, a blastematous material is thrown out in the sheath, which develops into new tendons. In all the tendons described by Mr. Tamplin, from dissections, the reparative process was so perfect that no trace of their having been divided could be detected. The non-union of a divided tendon may possibly occur, but it is very rare. After division of a tendon there may be some adhesions to interfere with the play of the muscles, but such are exceptions, the rule being that only very slight adhesions take place.

In reference to the rate of extension after tenotomy, some difference exists. English surgeons have adopted gradual extension, following the practice of Stromeyer and Little. American and Scotch surgeons, after dividing the tendons, restore the parts immediately to a natural position. This has a decided advantage, as adhesions are broken up, parts stretched, and much time gained.

The use of ether in difficult cases, as well as in simple, is of the greatest advantage, in breaking up anchylosis and morbid adhesions, and facilitating flexion and extension. Tenotomy, to be successful, however, must have combined with it both mechanical and physiological means. Several improvements have been made in Scarpa's shoe, devised in 1803. Little has modified the foot portion, so that it can be set free to the ankle, allowing passive motion. Sayre adds a ball and socket-joint at the medio-tarsal articulation, and substitutes Barwell's rubber artificial muscles for springs. After tenotomy, he recommends bringing the foot into

a natural position on a thin piece of board, and retaining by adhesive plaster. Plaster bandages and straight splints are useful in some cases. Active and passive motion, rubbing, bathing, electricity, and strychnia, subcutaneously, are all beneficial in developing the deficient muscles. The following are among the rare forms of talipes that have come under my care:

Equino Varus, acquired in a woman 23 years of age. When twelve years old she received an injury of the foot, by falling on some logs, which resulted in this deformity. She could not walk, except by support from a heavy iron frame attached to a shoe, which gave her much pain. Treatment commenced by dividing the tendo-achillis and plantar-fascia. In two months the foot was perfectly restored to its natural position, and she walked in a common shoe, without any support, with a good motion at the ankle.

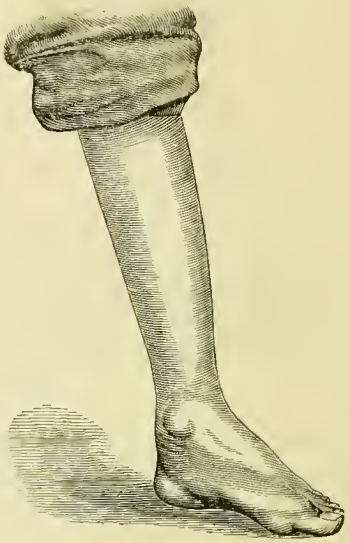
Talipes Planus, acquired in a boy 16 years old. This is a very rare form. It is a morbid relaxation of the muscles of the leg, and of the ligaments of the tibio-tarsal articulation, which, by Busch, has been called Talipes Planus. The limb in this patient was useless, not being able to support the body. The foot was turned outward and upward; in fact, a dislocation outward at the tibio-tarsal articulation. The circulation was feeble, the foot cold and poorly nourished. The muscles of the calf were atrophied. The external malleolus, with the fibula, was displaced, being drawn backward an inch, and fixed in a position immovable by the side of the tendo-achilles. The great toe was flexed immovably at a right angle at the metatarso-phalangeal articulation. The foot was in fact useless, and amputation was desired by the patient,

if the limb could not be improved so as to be useful. The deformity commenced when he was fifteen months old, after an attack of dysentery.

Mr. Adams speaks of malformation caused by absence of the malleolus, probably with fusion of the fibula and the tibia. This was not a malformation, but a separation of the fibula from the tibia at the ankle backward.

The indications were to place the foot in its natural position, and retain it there with the ability of flexion and extension.

Division of the tendo-achillis and peronei muscles did not give sufficient motion, and I subsequently divided the middle fasciculus of the external lateral ligament, which was felt tense after division of the tendo-achillis. This gave more freedom of motion. By division of the tendon of the flexor longus pollicis, the great toe was straightened, and the foot placed in a natural position. A stout shoe, with steel supports, was applied and worn, giving quite free motion, thus permitting the muscles to develop. The foot and leg have increased in size and strength, and the patient walks about with comparative ease.



"In the treatment of deformities from affections of the joints," says Gross, "American surgery stands preëminent." The old view that the deformity in hip-joint disease was caused by dislocation of the head of the femur upon the ilium, has been disproved. Drs. March and Sayre have shown the cause to be enlargement of the

acetabulum and absorption of the head of the femur; also twisting of the pelvis. The mechanical appliances of Davis, Sayre, Taylor, Dow, and Andrews, leave little to be desired in the treatment of hip-joint disease, securing extension and motion, and relieving pressure, while permitting air and exercise. Sayre's wire breeches are useful in advanced cases. Pneumatic aspiration may prevent rupture of the capsule, and give great relief from pressure by removing the fluid. Exsection of the head of the femur, first performed by White, of London, in 1822, is now a recognized operation for saving life, very often restoring useful motion. Anchylosis is treated by *brisement forcé* when fibrous; bony anchylosis is treated by subcutaneous division of the femur, or the removal of a wedge-shaped portion of bone, making a false joint, or by dividing the bone by perforations, etc.

Dr. Sayre, in 1862, modified the operation of Barton at the hip-joint, by removing a semi-circular segment of bone, above the trochanter minor. Dr. William Adams, of London, has made a very important modification of Barton's operation, following the precept of Hunter. It is performed subcutaneously at the neck of the thigh bone, within the capsular ligament. He enters a tenotomy knife above the trochanter, opening the capsular ligament, then passes a small saw and divides the bone. The limb is placed in a straight position, and a new joint formed. This has been successfully done by many surgeons. There are cases where the operation of Mr. Adams is not applicable, but where the deformity can be readily relieved by a division of the femur at a suitable point below the upper extremity. Mr. Gant has performed this with a fine saw, subcutaneously, just below the small trochanter, partially dividing, then breaking the bone. Mr. Maunders's operation is for the same situation, performed with chisel and mallet, subcutaneously.

ANGULAR CURVATURE OF THE SPINE.

Potts' disease is of frequent occurrence, yet the advance made in its treatment has not been so great as in other deformities. It has always been very much neglected, and the evidence of this is seen in the numerous deformed and hump backed people we see, especially among the poor and miserable of large cities. This disease, taken early, can be cured, and even in advanced stages can be greatly improved.

We are indebted to Drs. Sayre and Taylor for improvement and success in treatment.

As the disease commences in the intervertebral substance, generally several months elapse before deformity occurs, and this is the golden opportunity for treatment. If the bone is invaded, it ulcerates, and gives way, the trunk naturally bends down until a support is found, and after months or years, if the patient survives, nature cures by anchylosis, in a deformed and unchangeable position. The deformity must always remain.

Early treatment preserves the form and motion of the spine. If the disease has progressed to the vertebræ, it may be prevented from extending, and union afforded in a straight rather than in a deformed position. It is of the utmost importance to recognize the first symptoms of disease. One of the most prominent and persistent symptoms in its incipient stage is pain in front of the body in a line parallel with the disease; very seldom pain over the seat of disease. There is often deviation from the true line of the spinal column a little to one side. The patient has a peculiar attitude and carefulness of stepping to avoid shocks; often inability to stoop. Pressure made on the sides of the vertebræ causes pain. Extension and counter extension is a means of diagnosis. Paralysis not unfrequently occurs in the incipient disease of the cartilage before there is loss of substance in the spinal column. "This paralysis is not produced by compression of the spinal cord, but by irritation of the sensitive nerves of diseased action."—(*Taylor.*)

When we see these symptoms, or some of them, in a child under six years of age, we may be pretty certain of Potts' disease. The origin of this disease is often traumatic and often tubercular.

Rest in a horizontal posture on an air-bed is indispensable until the inflammation has subsided; so that when the diseased parts come in contact pain is not felt. The time required is often so long that the patient, deprived of air, sunlight, and exercise, dies. Hygienic measures are impossible in this prone position. A great variety of instruments and appliances have been devised to support the back, but of all the instruments devised the Spinal Brace of Dr. C. F. Taylor, of New York, seems the best adapted and the most useful for the purpose. It relieves the pressure at the diseased point, transferring the weight of the upper part of the spine from the vertebra to the transverse processes. "It is a splint for the broken back," allowing the patient the benefit of air and exercise. When applied, it requires changes according as the cur-

vature of the spine is diminished, and this adjustment requires eare and judgment.

When Taylor's splint eannot be obtained, a good substitute is a dressing of plaster of Paris over the entire trunk, forming a euirass, the patient during its applieation being suspended by the shoulders.

Dr. Sayre has treated sixty eases with the plaster jaeket, almost all of which had worn instruments for a greater or less period of time, and every one of the patients giving preference to the plaster jacket; therefore he recommends it eonfidently as a plan of treatment. The patient ean immediately walk about and get sunlight and air.

By this rapid sketeh it will be seen that great advanee has been made in the knowledge and treatment of deformities, and within the last twenty-five years, by the application of hygienic measures afforded by ingenious eontrivanees, and by original and new modes of operation, deformities before condemned as absolutely impossible of eure have been eured, and astonishing progress made, both in their prevention and in their suecessful treatment.

FAIRFIELD COUNTY.

Dr. C. A. Lindsley, *Chairman*
of Committee on Matters of Professional Interest, etc.:

Dear Sir,—The sanitary condition of the community during the last year, within the limits of Bridgeport, has been generally good. The spring and summer months have passed by without an epidemic of any kind, and comparatively a small proportion of diseases incident to season and climate. Pertussis and rubeola, commencing in autumn, continuing through the winter months, and remaining up to the present time, have prevailed quite extensively; they have, however, been quite mild, and amenable to treatment. For the treatment of whooping-cough I have used the bromide of potash, and feel very well satisfied that it modifies the paroxysms.

There have been occasionally a few cases of diphtheria; it has not, however, assumed the proportions of an epidemic.

It is not an unusual occurrence to meet with an imperforate anus. The following case, however, so far as I can learn, looks like an anomaly—imperforate rectum, and absence of the meatus urinarius. On the evening of January 12th, I was called to see a female child, three days old, well formed and developed, weighing a little over ten pounds. The nurse informed me that it had not passed from the bowels or bladder since birth—the difficulty was soon made out. From the day previous to the time I saw it, nothing could be retained upon its stomach—the abdomen was greatly distended—respiration labored, and the little patient seemingly in great distress. Various means were resorted to with a view of overcoming the trouble, without accomplishing any good result. On the evening of the fifth day after birth the child died. I regret we were not allowed a post-mortem, which in all probability would reveal a very singular and unusual malformation. Dr. Nash, who saw the case with me, although having had over forty years' extensive practice in midwifery, never met a similar one. For this reason I thought it advisable to present it to the consideration of the profession.

Respectfully,

C. W. SHEFFREY,

Reporter for Fairfield County.

Bridgeport.

WINDHAM COUNTY.

To Chairman of Committee on Matters of Professional Interest, etc.:

As I was appointed Reporter for the Windham County Medical Society, I have endeavored to secure material from the medical gentlemen of our county, that I might make out a report of some worth, but I fear I have not been successful in securing their valuable aid, and so my report will necessarily be very meager.

I submit the following for the year ending April, 1877:

In Putnam and vicinity there has not been the usual amount of sickness during the year, and I know of no epidemic in our vicinity. Our mortuary record has been less than for years. We did not have the usual amount of typhoid fever during the summer, and dysentery, cholera infantum, and other affections of the bowels were mild and infrequent, and it is a remarkable fact that we have had but very few well-marked cases of pneumonia during the past winter and spring. I have treated quite a number of cases of rheumatism, and I will briefly relate one or two cases in order to show my success in the use of salicylic acid, and right here I will say, that given in large doses, I have found it almost a specific for this disease, especially in its acute form.

First.—I will mention a case of muscular rheumatism of eight months' standing, which was gradually growing worse and worse. The muscle affected was the deltoid. At times the pain was extremely severe, would last for hours, and it was with the greatest care and difficulty patient could use the arm at all. If when walking on the street he made a misstep, causing a jar of the body, it induced great suffering; and while sleeping, either from an unconscious movement or contraction of the muscles, patient would be awakened with pain, which sometimes would last for hours; could not put his hand into pants pocket for months. Muscle was so sore to the touch that liniment could not be applied with any degree of friction. After applying blisters and various other external applications, including opium and belladonna plasters, I prescribed the following:

℞ Acid salicylic, - - - - - - - ʒjjj
Sodæ bicarb., - - - - - - - ʒjj
Glycerine opt.
Aqua font., *aa*, - - - - - - ℥ʒjj

M One tablespoonful every four hours, largely diluted in water.

In twenty-four hours patient said he was ten per cent. better, and in three days said he was one hundred per cent. better, and then discontinued the medicine. For one week he remained about the same; at the end of one week treatment was resumed for *four* days, when pain entirely disappeared, and has not returned since to amount to anything. Patient is now able to use the arm quite well, and he says it is improving all the while.

Second.—A very severe case of inflammatory rheumatism in a robust man, aged 35, of Irish descent. Patient had been sick one week when I was called to see him. I found him suffering very great pain, lying flat on his back, and unable to move a muscle; pulse 120, and full; joints considerably swollen, and red; breathing hurried; tongue heavily furred and dry; skin moist. I prescribed for him the same mixture as in the first case, and left him several morphine powders, $\frac{1}{4}$ gr. each, one to be taken every six hours. The following day pulse had fallen to 110; patient had slept some during the night; pain less, but unable to move or be moved without great pain. Same treatment was continued, and on the following day there was marked improvement; pulse 96, and soft; tongue some moist; swelling and redness considerably diminished; perspiration profuse; was able to be moved from his bed to the lounge; countenance much improved. Continued same treatment, omitting morphine except a powder at bed-time; patient continued to improve, so that on the fifth day the morphine was wholly omitted, and the mixture given in two teaspoonful doses every six hours, and so continued, with constant improvement, until the tenth day, when it was omitted, at which time patient was able to sit in a chair, but had little use of his limbs, though entirely free from pain; in fifteen days from my first visit, was about the house and walked out into the door-yard.

Third.—A case of less severity than the preceding one, principally confined to the lower limbs—in the knee and ankle joints especially. The salicylic acid mixture was given also in this case, with almost immediate relief, so much so that at the end of the third day the treatment was discontinued, but on the fifth day pain returned; treatment was at once resumed with same effect as at first, giving almost immediate relief, that is, after taking two or three doses. Treatment continued three days, then quinia substituted in gr. jjj doses, every four hours, but pain again returned, and at the patient's own request the salicylic mixture was again

given and continued five days, with no return of pain, the patient being up and about the house more or less.

I could relate several other cases of similar character, treated in the same way and with similar results, but it is unnecessary. My only object in relating the above is to show the result, in my experience, of the use of salicylic acid in rheumatism, and I have yet to see the slightest ill effects from its use.

J. B. KENT, M. D.,
Reporter for Windham County.

PUTNAM.

COMMUNICATION.

LOWELL HOLBROOK, M. D., THOMPSON.

There has been much less prevalence of zymotic diseases during the past year as compared with previous years; less typhoid fever by fifty per cent., but the cases that have occurred have been of a peculiarly intractable character, resulting fatally often before the end of the second week. The mortality in this disease has probably been at least twenty-five per cent. The prodromic, or forming stage, was protracted, but from the time professional aid was sought, and the disease was fully established, there was rapid loss of vital power, and in many cases appearance of profound toxemia. The symptoms of enteric trouble were early and strongly pronounced, leading to passive hemorrhage in some cases as early as the tenth day, followed by rapid and fatal exhaustion. All treatment seemed unavailing, no response being elicited to remedies, whether tonic or stimulating. No autopsy was made in any of the cases which I observed.

What peculiar influences gave character to the disease of last year, can only admit of conjecture, whether atmospheric or telluric. In this section there abound large tracts of low, marshy lands, for the most part, in ordinary seasons, covered, and pretty generally submerged, In peculiarly dry and hot seasons, like that of the summer of 1866, these localities become for the most part uncovered to the direct influence of solar rays, with here and there small pools of stagnant water scattered over their surface. To the noxious exhalations under such conditions I have been accustomed to attribute the disease, and have observed the greater number of cases to originate in near proximity to such sections, and then to be transferred to higher and remoter localities, often by persons transiently visiting, who in turn served as ecuters for the spread of the disease in healthier surroundings.

LITCHFIELD COUNTY.

Dr. C. A. Lindsley, *Chairman*
of Committee on Matters of Professional Interest, etc.:

Dear Sir,—I have been obliged to follow in the path of my predecessor, Dr. Goodwin, by obtaining all my information from the members present at the meeting of the County Society at Litchfield, April 24, 1877.

I was thus placed in possession of data from the following towns: Litchfield, Goshen, Norfolk, Winsted, Warren, Washington, Morris, Woodbury, Watertown, Plymouth, Thomaston, and Wolcottville.

The general health of the county has been unusually good during the whole year, and was especially so during the summer. Less summer diseases and little typhoid. The only epidemic of which I hear during this season, was one of measles in Plymouth, extending somewhat into Thomaston, and of a mild form.

The autumn was far more free from typhoid throughout the county, than for a number of years past. In Watertown, all cases seemed to be complicated, simulating bilious remittent, and were very perplexing. This same type has also modified the cases of pneumonia in that town.

During the winter, extensive epidemics have prevailed of scarlatina and whooping-cough. The former has been almost universally exceedingly mild; so mild as to need little or no treatment in the majority of cases, and not often followed by albuminuria. In Litchfield, there have been over forty cases within three or four months, with no deaths. In Wolcottville, there have appeared a few severe cases among the Irish, some of them fatal. The rest have been very mild.

I would here mention a peculiar disease, a sort of sore throat with ear-ache and discharge, in both adults and children, without scarlatina. It has appeared in Litchfield, Goshen, and Warren.

Whooping-cough has afflicted the whole county this winter and last autumn. It has been unusually severe and protracted, and has not spared those who have had it before—many adults having been compelled to stand a second attack. Pneumonia has occurred often as a complication, also acute bronchitis, and these cases

have been obstinate and often fatal. Cases of brain diseases after whooping-cough have not occurred

We have had our usual pneumonia this spring, but it has been, as a rule, mild, and less of it. Some fatal cases, however.

Dr. Bidwell reports many severe and obstinate cases of jaundice in Winsted.

To questions four and five, I gained but little expression of opinion.

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

Wolcottville, Conn.

POINTS IN THE ETIOLOGY OF TUBERCULOSIS—INFLUENCE OF MELANCHOLY AND OF AGE UPON ITS DEVELOPMENT.

Wm. Deming, M. D., Litchfield.

It is probable that tubercle is the material expression of the failure of the powers of life, and that such failure is the consequence of impaired nutrition—that is to say, that whenever the functions of nutrition are vitiated, tuberculization is possible. Deviation from the normal conditions of nutrition may be the result of insufficient alimentation or inanition—and this last condition may arise either by way of the digestive organs, or through the air-passages. In the former case, stricture of the œsophagus, cancer of the stomach, or simple ulcer may be the cause, and the frequent coincidence of these lesions with pulmonary tuberculosis —contrary to the generally received opinion—has recently been fully demonstrated by an eminent French pathologist. Even dyspepsia may play an important part in the development of phthisis, when the patient, dreading the distress which follows his repast, deprives himself as much as possible of aliment.

The diminution of the quantity of air brought into contact with the blood in the lungs, also gives rise to inanition; and it is in this manner that repeated acute bronchitis, chronic bronchitis, or stricture of the pulmonary artery, and generally, all causes which diminish the field of contact between oxygen and the blood operate.

Side by side with these great causes of tuberculosis may be placed other and less direct causes, such as want of light and heat, grief, sad thoughts, melancholy, religious terrors, etc. M. Peter has shown the remarkable results observed relative to the influence of melancholy upon the development of tuberculosis in the insane.

Laänec knew no more certain cause of tuberculization than the melancholy passions, especially when profound and of long duration, and cites in proof the example of a convent of women whose attention was habitually fixed upon the most terrible verities of religion, and who were forced by all sorts of constraints to an utter renunciation of their own natures. Under the influence of these odious practices, Laänec saw, in the short space of ten years, this convent three times repeopled in consequence of the loss of its members, every one of whom succumbed to pulmonary phthisis.

It is a matter of common observation that, among the insane, patients suffering from melancholy are much more frequently attacked by tuberculosis than those whose mania takes a more expansive form. It is easy to conceive the mode of action of the emotions of sadness and melancholy; they destroy the appetite, impede digestion, prevent assimilation, and thus produce a most unfavorable effect upon the general function of nutrition; then, according to the vulgar but correct expression, "the blood becomes bad," and from this vitiated blood tubercle is deposited. It is in this form of insanity that the number of blood corpuscles most diminishes. Dr. Bergoine has shown that in one hundred and fifty-eight cases of melancholy mania there were fifty-seven cases of phthisis, or about thirty-six per cent., while the proportion in all other forms of mental alienation was only about six and one-half per cent. In these cases, inanition first originates in the digestive functions, the patients refusing to eat, and subsiding into a state of profound depression; then by the respiratory functions, because the respirations are diminished considerably in frequency and force with such patients there is a strong tendency to coldness of the skin and extremities. The diminution in the amplitude and number of the respirations, which in these cases falls to fifteen, and sometimes even to ten to the minute, necessarily carries with it an insufficient oxygenation of the blood; little by little the capillaries become distended by a blood charged with carbonic acid, as is manifested by the cyanosis of the hands, nose, lips, and cheeks, then by the œdema of the face and coldness of the extremities. Finally, this depression of the powers of life is shown by the small quantity of urea excreted. This quantity, which in health should be from two hundred and seventy to four hundred and fifty grains, falls to eighty or one hundred grains, or about nineteen per cent. of the normal amount.

It is because he eats less, exercises less, and breathes less, that the melancholy maniac becomes tuberculous, and not by any mysteri-

ous influence of the moral over the physical. In the chain of phenomena which connects melancholy with tuberculosis, every link is clearly and distinctly defined.

Phthisis, occurring after the age of forty, and especially in old age, is generally looked upon as a pathological rarity; it is, however, so frequent that it may safely be said that cases of phthisis are nearly as common at seventy as at fifteen; in other words, among a hundred individuals at seventy years of age will be found about as many phthisical subjects as among the same number at fifteen years of age. But these persons who have resisted for many years the first attacks of the malady, still resist its progress when its lesions are more fully realized, and with them the disease advances more slowly, often allowing to them long years of life. Fonssagrives remarks, that after the age of forty-five, other conditions being equal, it is almost a matter of indifference whether one has phthisis or not. It is especially in city practice that the correctness of this opinion is most fully demonstrated, where many people in easy circumstances live indefinitely with their tubercles, and are regarded merely as valetudinarians, or persons in delicate health.

In hospital practice the case is not the same; there the malady progresses more rapidly, and even assumes its acute, or "galloping" form. Moncton found in one hundred and thirty women above the age of sixty, the considerable proportion of nineteen tuberculous subjects, and among them were seven aged from eighty to eighty-nine years, which sufficiently demonstrates that extreme old age is not incompatible with tuberculosis. The same author describes two varieties of the acute form of phthisis in old persons: in one form there are no characteristic symptoms, but a condition of hyperæmia of the pulmonary organs, from which are developed the characteristic gray granulations. This form mostly resembles an acute febrile affection, and is always of short duration,—fifteen or twenty days, perhaps. In the second form, cerebral accidents are added to the above symptoms, and are one of the causes of the rapid death of the patient. Finally, a third form is characterized by a febrile condition, with rapid prostration.

Thus it may be stated that acute phthisis in the aged differs symptomatically from the two former most frequently met with in the adult, viz., the asphyxic and the typhoid form. The anatomical lesions are the same, to wit, the gray granulations.

Moncton further mentions having observed the galloping form of the disease; that is to say, the lesions of chronic phthisis realized in a very short space of time.

MIDDLESEX COUNTY.

Dr. C. A. Lindsley, *Chairman*
of Committee on Matters of Professional Interest, etc.:

Dear Sir,—In reply to your first question in the postal card received to-day, I will answer (without any attempt at numerical exactness) that I saw *more* cases of typhoid fever during the year ending April 1, 1877, than for some few years preceding. The type of disease was more severe, the length of the period of the fever greater, and relapses more frequent, in spite of the greatest care.

The Connecticut River valley has usually afforded cases of typhoid during the autumnal season. Generally speaking, we have had a milder type of the disease than the towns situated in the valley above us. The disease is less frequent here than in the towns above, in proportion to the population. Such has been the case for the last eleven years, so far as I can form an opinion. The conformation of the site on which the town is built affords great facility for drainage, and though our system of sewerage is but recent, it has probably thus far had little influence on the number of typhoid cases. One of my patients probably contracted the disease in Philadelphia. This was the only case where the cause could possibly be ascribed to the "Centennial."

CONCERNING MALARIAL FEVERS.

Probably *one half, or even* MORE of our population, have had within a few years some form of malarial fever, mostly the intermittent. Last year was no exception to those previous. So far as I can judge, there were quite as many cases as during any other year since its first invasion—(about 1870, I think). Many having had intermittent for two, three, or four seasons, have ceased to have it during the later years; others who resisted previously, have had it during these years. It is *particularly noticeable* that the *foreign-born* population are the *most susceptible;* next to them those who have *more recently* come here to live, though American. In the older and central portion of the city scarcely a case has been developed, outside of the servant-class, who probably have in most instances acquired it elsewhere. This is probably largely due to the greater altitude of that locality; besides, it is inhabited by the older residents.

It has been suggested that the malarial has replaced in many places the typhoid. So far as my observation extends, it is not true in this locality—the number of cases of typhoid being about the same as before the advent of malaria.

Very respectfully,

F. D. EDGERTON, M. D.,

Reporter for Middlesex County.

MIDDLETOWN.

A CASE OF ARREST OF DEVELOPMENT IN THE HUMAN FŒTUS.

BY GEO. W BURKE, M. D., MIDDLETOWN, CONN.

On the morning of February 27, 1876, I was called to attend Mrs. M., at full timo with her fourth child. I arrived at four o'clock, and found the pains frequent, the head presenting favorably, and everything promising a speedy and happy termination of the case. Her previous labors, in all which I had been with her, had been comparatively easy, with rapid and effective uterine contraction, and causing little complaint on her part; indeed, I have never had a patient where the process of parturition seemed to be so perfectly an operation of nature with the healthiest results, as in her case; but this time she complained exceedingly, and out of all comparison with the apparently easy descent of the head. For twenty minutes before the final expulsion, there was also an unaccountable recession of the head of the child after each uterine effort; a delay which she had not before experienced at this stage of labor.

The child, which was very large, was born at 4:40, and for a moment or two cried vigorously, and then suddenly ceased. I immediately noticed that it was without arms, and that the funis, which was fully in proportion to the infant, had parted about three inches from its umbilicus. I caught this up and secured it with a ligature, when the child renewed its cries as strongly as ever. Quietly cautioning the nurse not to discover to the mother the form of the child, I had it wrapped up and removed from the room immediately, and as the mother was losing a large quantity of blood, turned my attention to the extraction of the placenta, which was accomplished without difficulty. Tonic uterine contrac-

tion was secured, and the hemorrhage was diminished, but the patient still suffered greatly from the constant pain. This, however, was relieved in the course of an hour by anodynes.

An inspection of that part of the funis attached to the placenta showed that it did not exceed twelve or thirteen inches in its entire length, which partly accounted for its breaking in the manner mentioned, and from the character of the complaint made by the mother, it is also probable that it was under one of the shoulders of the child, thus producing strong traction on that part of the uterus to which the placenta was attached. Even with so short a funis as twelve to thirteen inches, I believe it to be possible that the whole of the child could pass the os externum without rupture of the cord, if the latter were not diverted from a direct course to the placenta by crossing one of the shoulders as I have indicated. I am quite certain that it was not around the neck of the child when the head emerged, for a digital examination was made just then to ascertain if any such complication existed. And the child at birth was not removed from immediate contact with the mother, as I had special reasons for keeping it near her, owing to my knowledge of just how far the bed was protected, so that the rupture could not have been caused by any such removal.

The child was taken downstairs to be washed and dressed, so that the mother, whose nervous system was somewhat affected, might not be further disturbed by a knowledge of its form. On a careful examination it appeared to be perfect in every particular except the arms, which were wholly wanting; and even here there was no deformity,—the clavicles and scapulæ were perfect, and the shoulders well rounded off. On the lateral part of the left shoulder there was a slight gathering or projection of skin, about the size of an infant's nipple, but the right shoulder was smooth.

In the family history, which has been thoroughly investigated, there is nothing of habit or precedent to account for this want of development, and the parents themselves are models of physical health—indeed, in an experience of more than thirty years, I have never seen both father and mother who in all respects, as to bodily and mental proportion, were equal to this pair. The father is one of a family of fourteen, all living and healthy. The mother is the youngest of a family of twelve, ten of whom are living, and nine of these are married and have families. None of these are deformed, or have any peculiarity which would bear any relation to the case under consideration.

In attempting to account for this arrest of development, I have found only one time or cause which seems to have any proper physiological connection with the condition of the child; but whether even this is to be placed as cause or effect is difficult to determine. Now the mother is by no means of that class who are nervous or have peculiar fancies,—on the contrary, she is remarkable for her freedom from any such tendency, and for a cool and well-balanced mind. In a conversation had with her on the subject some weeks after her confinement, when she had regained her usual health, she said she had not seen anything or thought of any way by which she could account for this want of arms; but in answer to my inquiries as to any remarkable incident during the early part of her pregnancy, she stated that about the end of the first month she had a fright, which she described somewhat in this manner: Her husband was out of town for the night, and she was left with her three children in the house. After going to bed and sleeping a few minutes, this being in warm weather, and the door of the room being open, she declares that she awoke, and with her eyes wide open saw a woman standing near her bedside and holding a child in her arms,—that both were very pale,—that she was exceedingly frightened, and in her fear shut her eyes,—that when she opened them again the vision was gone, and she was left in a trembling and agitated state. She, however, summoned up courage, resolutely rose from her bed, and proceeded to light the lamp, but her limbs would hardly bear her weight, and she could scarcely move across the room, but she finally succeeded, and went to bed again. She had no further trouble of the kind that night, but during the following week was obliged to keep her bed most of the time, was unable to work, and required help. She was not really sick, but very weak without knowing any cause for it. She rallied from this condition without medical assistance, and afterward enjoyed her usual health up to the time of her labor.

In the latter part of the month of April, 1876, just preceding the time for the county medical meeting, I had the mother and child brought to a photographer, and secured the picture from which the accompanying plate is taken. The head is somewhat reflexed in order to get a good view of the shoulders.

At the present time, June 13, 1877, this child is still living, having had, in January last, pneumonia affecting each lung successively, from which it recovered as well as the majority of such cases. It uses its feet adroitly, picking up easily small articles

from the floor, and passing them about rapidly, using the large toe instead of a thumb, and appearing to enjoy itself as well as if possessed of a full and perfect set of upper extremities.

PUERPERAL INSANITY.

With Statistics Regarding Sixteen Cases Admitted into the Connecticut Hospital for the Insane.

By C. S. May, M. D.

A recent writer has said that the fact has long been recognized that the amount and types of insanity vary in different countries, and even in different portions of the same country. This has been my own impression; also that more cases seem to be developed at some seasons of the year than at others. After the heat and influences to physical depression which the summer brings, the later fall months are apt to precipitate insanity upon those already debilitated, nervous, and trembling upon the border lands. After the cold and privation of winter, those who are predisposed to insanity are apt to develop at once their latent mental abnormalities; at these times, also, those in whom these diseases have been of long standing, are more irritable and restless.

In regard to the variability in the types of insanity, I am satisfied that the statement quoted is correct, and, as has been suggested, it is quite certain that those who treat mental diseases in New England meet with a New England type of insanity, which is distinct and characteristic, being peculiar and palpable to those who visit asylums in different parts of the country. Allowing this to be true, we meet, of course, with some things to be learned only by experience, for we cannot without some modification bring the statements, statistics, prognosis, and treatment of other than New England writers to bear upon the cases with which we have to deal. During the past three months there have been admitted to the hospital at Middletown an unusual number of cases of puerperal insanity. Having often been called upon to give a prognosis, I have been led to study the experience there for the past ten years with this class of patients, and I here present the results of my investigation:

CASES OF PUERPERAL INSANITY FROM 1868–1877.

No.	Age.	Nativity.	DURATION.		RESULTS.				
			In Hospital.	Total.	Recov.	Imp.	Sta.	Died.	In Hospital.
1	35	Ireland,	32 days.	90 days.	1				
2	32	Connecticut,	.....	26 years.			1		1
3	27	England,	53 days.	3 mos. 23 ds.	1				
4	33	Ireland,	103 days.	5½ months.	1				
5	41	Ireland,	16 mos.	16 months.		1			
6	19	New York,	5⅛ mos.	5½ months.	1				
7	22	New York,	4½ mos.	5 months.	1				
8	29	Connecticut,	5⅛ mos.	6⅛ months.		1			
9	30	Germany,	4½ years.	7 years.			1		
10	20	Connecticut,	3⅛ mos.	4⅛ months.	1				
11	27	England,	16 mos.	23 days.				1	
12	33	Connecticut,	.....	.....					1
13	28	Ireland,	19 days.	25 days.	1				
14	29	New York,	.....	.....					1
15	22	England,	3 mos.	4 months.	1				
16	44	Germany,	.....	.....					1
					8	2	2	1	4

Total number of females admitted,	613
" " with puerperal mania,	16
Percentage of whole number,	2.61
" of recoveries,	50
Average age,	$29\frac{4}{12}$
" duration of disease,	119 days.

Of these cases one manifested homicidal tendencies; one was disposed to kill the child, and one was admitted for the second attack.

Without doubt many cases are treated and recover in their homes, and never are available for statistical purposes; and so my figures, showing a recovery of fifty per cent. in the cases collected, cannot be said to be exact, for no doubt a much larger percentage of those attacked with puerperal insanity recover; but there is a distinction, which, with others, I have made, that some have not observed, and for this reason their statistics lose much of their value. It has been the custom of many writers to class as puerperal insanity the insanity of pregnancy, delivery, lactation, and the puerperal state proper. These are all distinct in many of their characteristics, and the first two forms are rarely treated away

from the patient's home, and are limited by the termination of pregnancy or labor. The sixteen cases reported are strictly those of puerperal insanity, leaving out of account those dependent upon undue lactation as a cause, the latter being almost always characterized by cerebral anæmia, with mental depression, dread of impending evil, suicidal propensities, and often a disposition to injure the child. Puerperal insanity is almost always maniacal in its manifestations, and the patient sings, dances, shouts, cries, and is otherwise turbulent. In five cases seen this winter, four showed marked salacity, and the presence of men excited lascivious actions and speech; again, there seems to be a tendency to filthy speech and profanity, with boisterous conduct on the part of those unused to anything save gentle manners and words. I have found our patients anæmic, with weak pulse, cold, clammy extremities and skin, and a sluggish condition of all emunctories, which clearly indicate the therapeutics required. Then, too, they rarely, if ever, sleep at all well, and the first indication seems to be to procure good sleep, and a plenty of it. No one drug does this in all cases. A careful use of chloral hydrate is often successful; but I like the plan of changing the hypnotic frequently, using nothing regularly. Sometimes, when all else has failed, a hot alcoholic drink will bring the sleep sought. Of moral treatment, I can but repeat as a result of my observations, what is so generally palpable to all who see this form of disease, and that is, the necessity of early removal to the care of strangers. More often than otherwise there appears a dislike for those of the family, and a resistance to their authority, while readily recognizing authority in a stranger, and settling down to a quiet, much needed and beneficial.

I am inclined to think that a hereditary tendency to insanity in general is operative to produce this form of the disease much more frequently than is generally believed, or statistics show.

ESSAY

ON THE PATHOLOGY OF THE PNEUMOGASTRIC NERVE.

By James Campbell, Jr., M. D., Hartford.

In the animal economy, the pneumogastric nerve stands pre-eminent; the functions of the body, with which it is associated, are of the greatest importance to the maintenance of life, for it is connected with respiration, with circulation, and with digestion. These three most important functions are guided and controlled by this nerve. It has been appropriately named by one author, "the great tri-visceral nerve." Its distribution is very extensive, and its relations are of the most complex kind.

Before speaking of the pathology of the nerve, it will be well to review very briefly its distribution and physiological action. It arises from the lateral portion of the medulla oblongata, just behind the olivary bodies. At this point it is in close proximity with the glosso-pharyngeal and spinal accessory nerves. The nerve passes through the medulla in the direction of the floor of the fourth ventricle, where several enlargements or nuclei appear, which are connected with the nerves having their origin at this point. The root of the pneumogastric is here in the closest relationship with the hypo-glossal, the fifth, the seventh, the glosso-pharyngeal, and with the spinal accessory. As the fibres of the pneumogastric nerve emerge from the brain they pass out through the jugular foramen (*foramen lacerum basis cranii*); here the nerve is surrounded by the same sheath of dura mater as the spinal accessory, and by the same layer of arachnoid membrane as the glosso-pharyngeal. * In the foramen there is a ganglionic enlargement, and there are here connections with the facial, with the spinal accessory, with the petrous ganglion of the glosso-pharyngeal, and with the sympathetic. Half an inch further down

* Quain's Anatomy, 8th ed., vol. i, p. 559.

is a second ganglionic enlargement of the pneumogastric nerve, which is said to communicate with the spinal accessory, with the hypo-glossal, with the first two spinal, and with the sympathetic. The nerve is distributed to the larynx, the pharynx, æsophagus, lungs and heart in chest, and to the stomach, the liver, the pancreas, intestine, supra-renal capsules, and kidneys, in the abdomen. It is also in close connection with the phrenic and sympathetic nerves in the abdomen, and these connections are of great physiological interest. The diaphragm is the most important muscle of respiration, and is thus brought into harmonious action by the pneumogastric. We recognize this nervous connection in the act of hiccough, and in the attempt to maintain the greatest quiet in the muscle during acute disease of the abdomen; so, also, in the intimate connection of disease just below the diaphragm, with the pleura and lung above it. Thus, in cases of gall-stones, and similar affections, we often have pleuritic disease at the same time.

Such, in short, is the extensive distribution of the pneumogastric nerve; and, before speaking of its pathology, we will briefly refer to its physiological action.

The nerve is of double character, having both afferent and efferent fibres. It regulates respiration. The minute afferent branches from the pulmonary plexus of the pneumogastric reach the structure of the lungs and bronchi; and the impressions there received are conveyed to the brain, and are followed by reflex movements. By its connections with the fifth and seventh nerves, the entrance of air by the mouth is regulated; by means of the hypo-glossal the tongue is adjusted so as not to interfere with the free passage of air. The glosso-pharyngeal and external branch of the superior laryngeal control the pharynx, and bring it into right sympathetic action; the internal branches and recurrent regulate the glottis; and the muscles of respiration, supplied by the spinal accessory, the phrenic and branches of the spinal nerves, complete the respiratory act. The important nerve center for this function is the pneumogastric, at the floor of the fourth ventricle. Spasmodic asthma is due to the minute branches causing contraction of the bronchial tubes. Rosenthal says, the superior laryngeal nerve has inhibitory action upon the respiratory movements, and upon the diaphragm, and acts centripetally upon the brain. Burkart has shown that the recurrent has a similar action. Another important function controlled by the pneumogastric is deglutition.

Perhaps the most important influence of the pneumogastric

nerve is seen in its effect on the heart. It controls its movements, and irritation of the nerve retards its action. A powerful galvanic current applied to the pneumogastric arrests the heart in diastole. The connection of the heart's action with respiration is very important, as the one is essentially dependent upon the other; unless respiration is performed, the heart's action ceases, and *vice versâ*. The presence of carbonic acid in the capillaries, and the deficiency of oxygen in the blood, exert their influence upon the minute afferent branches of the pneumogastric nerve; these convey the impression to the medulla, which leads to the completion of the respiratory act.

The nerve supply of the pneumogastric to the organs of digestion is essential for the right performance of the functions of these organs. The stomach is abundantly supplied with filaments of this nerve; they are distributed to its muscular, mucous, and peritoneal structure. During digestion the different sensory fibres, which supply the gastric mucous membrane, are irritated, causing dilatation of the gastric vessels (Claude Bernard and Rutherford), and in disease they become acutely active.

Habershon mentions an interesting case of a patient who suffered from ulceration of the stomach, the pain being most intense and exhausting. The autopsy showed a large branch of the pneumogastric passing across the floor of the ulcer. It is probable that the action of the pylorus is also regulated by this nerve.

The interesting experiments of Claude Bernard, Pavy, and others, in reference to the influence of the pneumogastric nerve upon the functions of the liver, are well known, and we will not dwell upon them here. The connections of the pneumogastric with the supra-renal capsules, with the renal plexus, and other portions of the sympathetic nerve of the abdomen, with the uterine organs, etc., leads to the reflex irritation of the stomach so frequently present in cases where these organs are diseased. Numerous experiments have been made by physiologists, illustrating the effect of division of the nerve upon the different organs to which it is distributed. After division near its origin, there is loss of sensation in the throat—so that substances pass into the larynx unheeded; respiration, at first accelerated, becomes slower and slower, until it ceases altogether; there is loss of motion in the vocal chords; the action of the heart is impeded, with lengthened diastole, the pulse being fuller and larger from lack of tension; the dependent portions of the lungs become congested, and if life is

prolonged any length of time, carnification of the lung throughout its greater portion occurs. This condition is sometimes found where the nerve is injured by pressure. After division of the pneumogastric, there is loss of contractile power in the æsophagus, and food entering it does not reach the stomach; digestion is impeded, the mucous membrane of the stomach becomes pale, and its secretion is checked. Irritation of the divided nerve causes muscular contraction of the stomach and æsophagus, and when the nerve is paralyzed, the stomach yields to expansive forces, and becomes distended.

In considering the diminished power of the pneumogastric in the abdomen, we can scarcely separate its individual action from that in which it is associated with the vaso-motor nerve. The intimate union of the pneumogastric with branches of the spinal and sympathetic may produce symptoms as if the pneumogastric itself were affected. A remarkable case of this kind of action is related by Dr. Burdon Sanderson in reference to the fifth nerve affecting the pneumogastric in the rabbit, by causing the animal to smell ammonia. He says: "The effect is immediate, according to the strength of the ammonia. The heart is arrested in diastole, or the diastolic intervals are lengthened." Inhalation of chloroform may stop the heart's action in the same manner. This connection of the fifth nerve with the pneumogastric is of great interest in some cases of disease—as hydrophobia.

We might adduce a large number of instances of the manner in which the pneumogastric is affected by reflex action, but will here only refer to the effect produced upon the centers of the nerve by disturbance on the cerebral aspect of the ganglia. It is strongly influenced by the passions and emotions, as anger, joy, or sorrow. The special senses directly influence it; an offensive object, and, still more, a disgusting smell, induce nausea and vomiting. Sudden alarm at the sight of danger affects it powerfully, as is shown by the quickened respiration and rapidity of the heart's action under such circumstances. The pneumogastric nerve has control of the vital functions, and yet is, to a great extent, the willing servant of the mind and will. We have now spoken of its extensive distribution. Each branch has a particular purpose; and by its means the throat and larynx, the lungs and heart, the stomach, the liver, and the kidneys are brought into the closest connection. In health the hidden connections are in harmonious working; but

when disease occurs, the jarring of disordered action sends its effects to all the parts thus linked together.

The following laws of action are laid down in Habershon's excellent lectures upon this subject, as often observed in the study of clinical medicine:*

I. Disease at the origin of the nerve may induce symptoms in any of its branches, and this induced state may be one of hyperæsthesia, or of anæsthesia; the one spasmodic in character, and the other paralytic.

II. Irritation in any set of peripheral branches may induce disturbance in any part to which the nerve is supplied, or at the nerve center itself.

III. Alternation of irritation may occur; at first one set of nerves, then another, becoming implicated. This peculiarity of functional disease is of great clinical interest. For instance, spasmodic asthma, of an aggravated kind, may suddenly disappear, giving place to great irritability of the stomach; this to cerebral symptoms, and these again to severe neuralgia. Violent vomiting is sometimes followed by loud cough and temporary loss of voice.

In general weakness there is want of power in the parts supplied by the nerve This condition is especially marked towards the close of disease. The occurrence of bronchitis and inflammation of the lungs in weakened subjects is, often, merely the giving out of the nerve supply. When patients are much reduced from chronic affections of the stomach or kidneys, the same conditions may be induced from exhaustion of the pneumogastric.

Another evidence of exhaustion of this nerve is seen in the loss of appetite, and inability of the stomach to digest food, in persons weakened by prolonged mental application.

The pneumogastric nerve may be affected as a whole, as in diabetes. Dr. Charles Shearman, in a paper published in the *Medical Times* of 1856, on the "Neuroses of the Pneumogastric Nerve," drew attention to the depression of spirits, the sense of exhaustion of the stomach, yawning, sighing, and often palpitation, to the disturbance of digestion, and, in many cases, to the diabetic condition of the urine. These symptoms often were periodical in character, and, when the condition was recognized early, they were amenable to treatment.

In true diabetes, the branches of the pneumogastric are especially

* Lumlean Lectures, Brit. Med. Journal, 1876.

affected, and we find not only the glycogenic function of the liver interfered with, but the functions of the lungs disturbed; palpitation of the heart is often present, and the voice is sometimes changed in character; cerebral symptoms are also induced, the digestion is impaired, and we get the red tongue, the dry skin, the confined condition of the bowels, and, at a later date, the diarrhœa; and, as to the brain itself, the melancholia which is so often present.

The same condition of the pneumogastric with the vaso-motor nerve is seen in cases of exophthalmic goitre.

The larynx may be affected by disease of the pneumogastric, of a central, local, or peripheral origin, and the affection may be of a paralytic or of a spasmodic nature.

In the paroxysm of an epileptic convulsion, the larynx is spasmodically affected, and in the intervals between the paroxysms, vague sensations are felt which are traceable to the same cause. An impression is made upon the nervous system, one of the branches of the pneumogastric thus becomes involved, the heart, lungs, or throat becoming affected, and we get a sensation of choking, dyspnœa, or stridulous respiration, without loss of consciousness.

There is much doubt as to the pathology of whooping-cough; but there can be no doubt that the parts supplied by the pneumogastric nerve are especially affected. The spasmodic condition of the larynx, the urgent dyspnœa, with the closed condition of the *rima*, producing lividity of the countenance, and the long-drawn inspiratory sigh, the irritability of the chest, and cough often followed by emphysema, and the sensibility of the stomach, all go to show that the whole of the branches of the nerve are in an extremely sensitive condition. The fact, says Habershon, that the disease is one of contagion, does not militate against the idea that it is the pneumogastric that is especially affected. In measles the same hyperæsthesia of the branches of the pneumogastric is present, as evinced by the same category of symptoms. In all forms of local affection of the larynx, as croup, catarrh, or ulceration, spasmodic contractions are readily induced, and this greatly aggravates the inflammatory disease.

Spasmodic disease of the larynx, due to peripheral irritation, is caused by a variety of conditions. In cases of elongation of the uvula, irritation of the larynx, with cough, is often produced. This is generally due to reflex action through the superior laryn-

geal nerve. This reflex disturbance of the larynx is more decided in aneurismal disease of the aorta, and of the large vessels of the neck, which may produce pressure on the recurrent nerve. This may be only slight spasmodic action at first, becoming afterwards very distressing, and at last producing paralysis from long continued pressure. We have now under observation a typical case of reflex irritation of the larynx from aneurismal disease. At times the patient suffers from irritation of the throat, with crowing respiration, and inability to get a sufficient supply of air into the lungs. The throat is so sensitive that, as yet, we have been unable to make a satisfactory laryngoscopic examination. In heart disease of an organic kind, we may also have reflex irritation of the laryngeal nerves. The patient is suddenly awakened by a suffocating sensation; he is greatly distressed for breath, and may be unable to articulate for a short time. These are not to be confounded with the ordinary want of breath in heart disease. They are due to reflex action on the larynx. The same symptoms may be caused by enlarged glands in the neck, or upper portion of the chest.

In gastric disturbance there is often a dry sensation in the throat, with tickling, that the patient can hardly be made to believe is not due to actual irritation of the larynx itself. In hysteria the spasmodic affections of the larynx are closely connected with those of the œsophagus, and the combined action of both gives the effect as of "a ball in the throat" (*globus hystericus*).

Diseases of a paralytic nature, affecting the larynx, may be of central, peripheral, or local origin. In exhaustion of the recurrent nerve we have paralysis of the larynx, as during syncope and towards the close of life. This is illustrative of the first class. The severe forms of labio-glosso-laryngeal paralysis belong to this class, the disease being of a central origin. In cases of weakened condition of the vocal chords, the disease may be central, local, or recurrent in character. In the first instance it may be due to defective will-power. Sudden shock may also produce this condition of the vocal chords.

Perhaps the most interesting cases of paralysis of the vocal chords are those in which the affection is due to reflex action. Pressure upon the recurrent nerves from aneurism, tumor, or enlarged glands, may produce this condition in greater or less degree. Pleuritic thickening about tuberculous lungs is said sometimes to induce paralysis of the vocal chords.

We will now pass to the affections of the lungs and heart, which are connected with disturbance of the pneumogastric nerve, omitting for want of space the affections of the æsophagus.

The pulmonary plexuses are situated at the root of the lungs; they are connected with the sympathetic and cardiac branches, and are distributed to the minute structure of the lungs. In the morbid processes recognized, we may adopt the same arrangement as previously, viz., those of a spasmodic and those of a paralytic nature. In the first class there is increased irritability of the sentient nerve centers, the respiration is quickened, and there may be violent cough and dyspnœa; in the second class, there may be little or no cough, and no effect may be produced by irritants, respiration is slowly performed, but is deep and irregular. With weakness of the system there is increased irritability of the nerve centers, and the center of respiration is no exception to the rule. In continued fevers, with increasing exhaustion, the respiration becomes more hurried, the lungs engorged with blood in their posterior or dependent portions, the power of the heart is lessened, and the nervous energy is becoming exhausted. In whooping-cough, to which reference has already been made, the principal symptoms are those connected with the throat; but it often happens that bronchial complications ensue, and, not infrequently, emphysema. The mechanical pressure upon the delicate air-cells may have to do with this result; but we must not forget that the par. vagum which supplies the larynx is also distributed to the lungs. The nerve power is weakened, nutrition is interfered with, and this condition is favorable to the production of emphysema.

It is conceded that true spasmodic asthma may be due to disturbance of the origin of the pneumogastric as well as to peripheral irritation. This disease may be associated with heart trouble; but there is a great difference in the suddenness and severity of an attack of this kind and one of true spasmodic asthma, which comes on with no warning and no evidence of previous organic disease.

There are numerous instances to illustrate the result of direct irritation of the peripheral branches of the pneumogastric in the lungs, as in hay asthma, the irritating substance is directly inhaled, be it pollen or other particles, and in inflammatory diseases of the chest, bronchitis, broncho-pneumonia, emphysema, etc., the muscular fibres of the bronchial tubes are excited to contraction, and in-

crease the dyspnœa. It is an important factor in the treatment of these diseases, so to soothe the nervous irritation as to do away with the contraction.

The instances of spasmodic pulmonary disease due to reflex action are very different, both in character and severity.

In the nervous irritability of hysteria, or uterine disease, an impression is carried to the medulla by the spinal or sympathetic nerves, and thence by efferent nerves to the lungs, so that respiration becomes accelerated—not infrequently these patients are seen breathing at the rate of one hundred respirations per minute; but this condition, though weakening, is comparatively harmless; it will give place, perhaps, to irritation of the stomach, or some other organ supplied by the pneumogastric nerve. Very different is the asthma due to cardiac disease. The blood in these cases is delayed in the pulmonary capillaries, and the system is deprived of its proper supply of oxygen. This disturbance of the balance between the circulatory and respiratory system leads to urgent dyspnœa. In persons suffering from simple irritation of the stomach, gout, syphilis, intermittent and remittent fevers, also, the action of the pulmonary branches of the pneumogastric may be more or less modified, thus it becomes the physician to be discriminating in his diagnosis, or his treatment will be of little avail. The conditions that are produced by paralysis of the pulmonary branches of the pneumogastric are similar to those caused by division of the pneumogastric in the neck, to which reference has been made in speaking of the physiology of the nerve. Cases of apoplexy where the clot is formed in the fourth ventricle, and those of opium poisoning, are instances of this kind. This condition of the bronchial branches of the pneumogastric may also occur from local causes: cases occur every winter of persons at the extremes of life, where, from a cold, a passive inflammation is set up in the lung, there may be no cough, the respiration is slow, and the patients rapidly fail in strength and soon die. This condition is also seen in persons weakened from prolonged disease.

The most important function in the animal economy—the circulation—is very directly influenced by its nervous supply. A large plexus is formed by the branches of the pneumogastric and sympathetic nerves; these pass down from the neck, and at the arch of the aorta the cardiac plexus is situated, from which numerous branches pass direct to the heart. Irritation of the cardiac nerves,

and of the pneumogastric, causes pain and diminishes the frequency of the heart's action. When the nerve is paralyzed or divided, the inhibitory power is taken away, and the heart acts at first with increased force. Disease of the heart due to or influenced by the pneumogastric nerve may be paralytic or spasmodic, and due to local, central, or peripheral causes.

The cardiac distress caused by nervous shock is an instance of the action of the cerebrum and emotions upon the origin of the pneumogastric nerve, and thus upon the lungs and heart. The effect is said to be due more to the pneumogastric than to the sympathetic, although in all cardiac affections the action of the vasomotor nerve is of great importance.

Altered nervous supply is the cause of the distress in many organic diseases of the heart. In renal disease, severe attacks of angina sometimes occur where the difficulty is chronic in its nature, as in small granular kidney; but there are other conditions to be borne in mind in reference to this disease, the condition of the blood is changed, there is degeneration of the capillaries and altered tension of the arteries. The muscular substance of the ventricle is hypertrophied and the respiratory centers are acted upon by impure blood. At the same time, also, that the afferent nerves convey impressions from the kidney and renal plexus of nerves, the branches of the sympathetic affect the same nerve centers. The action of the cardiac ganglia upon the heart is also a more direct source of disturbance in these cases. The same remarks apply to those cases of angina pectoris where there is extensive disease of the coronary arteries, and also to those cases where there is degeneration from gouty diathesis, without renal disease or albuminuria.

These patients suffer from pain, palpitation and shortness of breath on going upstairs or making any unusual exertion. In the night, generally after the first sleep, they are often aroused by a sense of suffocation. there is palpitation and acute pain over the cardiac region, the paroxysm soon subsides. but causes great alarm and distress. On the most careful examination of the heart no abnormal sound may be heard, but there is evident disturbance of function; there is inhibitory action of the nerves of the heart, and the pneumogastric is at fault. In some cases of gouty disease affecting sometimes the heart, and sometimes the kidney, the hepatic function is disturbed, and there is transient glycosuria. This condition is sometimes overlooked, from the

physician's not remembering that the specific gravity of the urine in gouty subjects, though containing sugar, may not attain a density of over 1015 or 1020, or a little more.

Some attribute the sudden cessation of the heart's action during the administration of chloroform to this inhibitory action of the pneumogastric, and they state that the heart would act more efficiently if this restraining force were removed by the full narcotic action upon the nerve center. * (Lauder Brunton). The pathological conditions caused by large apoplectic effusions are of much interest in their connection with the pneumogastric. When a clot is formed in the fourth ventricle, there is partial paralysis of the pneumogastric; the restraining power is removed from the heart, and it pulsates with increased force. In many of these cases, however, the vessels are diseased, and the left ventricle hypertrophied. In pericardial effusion and in carditis, the heart's action is diminished in power, and there is exhaustion of the nerve supply.

This is said to be especially connected with the condition of the sympathetic nerve and with the cardiac ganglia.

The pneumogastric is affected, however, as is shown by the quickened respiration, impaired digestion, feeble voice, etc. The ganglionic nerve supply of the stomach and abdomen is such that the closest relationship exists between these parts and the heart. Thus, in disease of the stomach, the heart is very readily affected, as from irritating poisons also in peritonitis. A sudden blow upon the epigastrium, as is well known, may cause instant death from cessation of the heart's action. A shock from cold will affect the heart with almost equal power.

The pneumogastric nerve in the abdomen is in close relationship with the solar plexus and semilunar ganglion of the sympathetic nerve, and it is very difficult to separate the morbid changes in one from those which have their origin in the other. Irritation of the pneumogastric will produce pain in the stomach, vomiting, altered secretion, and perverted sensation. When the nerve is weakened or paralyzed, we have anorexia and distension of the stomach. The causes producing the first-mentioned set of symptoms may be local, central, or peripheral in their origin.

Those due to central disturbance are concussion of the brain, abscess, acute cerebral disease, tumor, tubercle, apoplexy, anxiety, epilepsy.

* Brit. Med. Journal, 1876.

The vomiting produced by cerebral disease is sometimes of the most decided nature, and it is of great importance that the nature of the malady be rightly understood. To treat the stomach when the brain is at fault is often of great injury to the patient.

Bilious attacks of early life are often to be traced to cerebral disease, and are frequently overlooked until the true nature of the disease is unmistakably indicated.

The cases of brain trouble in which the pneumogastric is irritated are those where the fourth ventricle is affected.

In tumors situated in the cerebellum, the vomiting is often of a very marked character. The tongue is clean and the bowels are in a normal condition; but still the food is ejected at irregular intervals, and especially in the morning.

In cases of cerebral tubercle, as is well known, vomiting may be an early and important symptom. This irritable condition of the stomach does not always accompany tubercular meningitis. Traumatic injury of the brain, over anxiety, epilepsy, and commencing insanity may induce this irritable condition of the pneumogastric at its origin, and the disturbance may be transmitted to the stomach.

Then there are cases of persistent irritation of the mucous membrane of the stomach; the vomiting continuing day after day for years, until the patient is reduced to the last degree. This condition may be due to some previous disease that has left the nervous system exhausted and irritable. Often these patients are said to have organic disease of the stomach, ulceration or cancer, and ordinary medication seems of little avail. It would occupy too much time to enter into the diseases of the stomach and their general symptoms, and we will only remark that vomiting as a symptom is common to inflammation of the organ, whether acute or chronic; this generally without pain, or with very little, so long as only the mucous membrane is affected. Even in cases of poisoning, the pain may be wanting. It is where ulcerations have occurred that pain is most constant and distressing; it is associated with the vomiting of food. Pain comes on at the pit of the stomach and through the back, soon after food is taken, and is only relieved by the food passing out of the stomach through the pylorus, or by vomiting. In cancerous affections, vomiting is a common symptom; but there may be almost entire absence of pain if the pylorus and œsophageal orifices are free from obstruction. Interesting illustrations of cases where vomiting is purely

reflex in character, and induced by irritation of the peripheral branches of the pneumogastric, are often seen in common practice. Thus, from irritation of the pulmonary branches, to which reference has already been made, disturbance of the stomach and vomiting is often produced.

In the early stages of phthisis there may also be an irritable condition of the stomach—loathing of certain articles of food, and vomiting, accompanied by the "stomach cough," so called. There is furred tongue and irregular action of the bowels; but the stomach symptoms are most prominent, and unless the lungs are very carefully examined, the physician is led into error.

In organic disease of the heart, with obstruction, the stomach is affected by the mechanical hindrance to the blood, the right side of the heart being engorged; the liver also becomes over-filled, and with it the branches of the portal system of veins. In this way the coronary veins of the stomach become filled, causing increased secretion of mucus, gastric irritation, and vomiting. There is more or less distension from gas, and occasionally there are hemorrhagic erosions; pain is also present in these cases. In mitral disease and dilatation, we may have severe vomiting.

Writers upon this subject state that the vomiting is produced through the action of the cardiac branches of the pneumogastric and sympathetic. Others think the connection of the phrenic and pneumogastric, and their action on the large hepatic veins, may be the source of this connection. The vomiting thus coming on at a later stage of the disease may be the precursor of a fatal termination.

The vomiting from reflex action in pregnancy is too well known to need mention. In the early stage of ovarian disease, however, vomiting is sometimes a constant and distressing symptom, and this may be before there is any appreciable enlargement of the ovary. In a patient of mine this was the case. A young married woman was seized with attacks of vomiting—the sickness coming on usually in the morning—and although she menstruated regularly, she could not be convinced that she was not pregnant. On careful examination some three months after the stomach symptoms appeared, a small tumor of the left ovary was discovered, which rapidly developed, the stomach symptoms subsiding. In these cases of reflex irritation, the vomiting is irregular—not regular, as in cases where it is due to organic disease of the stomach. The troublesome vomiting so often present in young girls with

chlorosis and scanty menstruation, also that of young married women who are not pregnant, yet who suffer from gastric symptoms due to irritation of the ovaries and uterus, are types of reflex disturbance of the pneumogastric nerve from peripheral irritation. Among the diseases in the abdomen which produce gastric disturbance by reflex action, may be mentioned peritonitis, disease of the pancreas, supra-renal capsules, and kidney. Vomiting due to mechanical obstruction also comes under this head.

The changes in the pneumogastric nerve that produce pain and perverted sensation in the stomach are of much pathological interest, as also are those producing distension of the stomach; but we have not space to dwell upon them here.

The functions of the liver, and the influence of the pneumogastric nerve upon them, are very interesting. Irritation of the nerve at its origin causes disturbance of this organ, and produces glycosuria. We find this condition associated with functional disease of the liver where the nervous system is especially involved, and the instances of almost instant jaundice caused by nervous shock are by no means rare. Habershon tells of a woman in whom jaundice was immediately produced on finding the clothing she had been engaged to wash had taken fire while hanging out to dry. It is well known that acute yellow atrophy of the liver is often connected with extreme mental depression. In this instance the pneumogastric is intimately connected with the vaso-motor and sympathetic nerves.

To describe fully the pathological conditions of the pneumogastric nerve would lead us into almost every class of diseases, and into nearly every organ of the body. We have attempted to give, as succinctly as possible, the more important conditions of the nerve, and the manner in which disease affecting it may influence various organs, either directly or by reflex action. In disease located at the nerve center, the most distant organ may be the first to become disturbed; or the difficulty existing in one branch of the nerve may produce symptoms in an organ supplied by another branch.

That restraining power which in health controls the functional activity of separate parts of the body, is best seen in its beautiful adaptation and beneficent design, when we compare the quiet harmony of health with the disorder and distress in the whole economy when that restraining power is removed.

THE COTTAGE OR FAMILY SYSTEM

FOR TREATING THE INSANE.

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The Cottage or Family System, or in other words, Segregation, does not mean the distribution of the insane among families, such for example as is the practice in some parts of Scotland, and at Gheel in Belgium, but their division into households of, say from thirty to fifty, and treatment in detached buildings adapted to the wants of the respective classes. For the acute, and any other cases which might need it, there would be a hospital proper attached to the administrative building, or medical headquarters. The proportion requiring strictly hospital accommodation would not exceed a quarter of the whole.

This plan is opposed, not only as being more expensive, but more difficult of management every way. Whether the objections rest on a real foundation or not, it is one of the purposes of this paper to show.

It is not unnaturally supposed that house-room for several hundreds of this class can be provided at a less expense in a single large building, than in several small ones; supposing, of course, that the latter are to contain for the inmates a sufficient amount of space.

Let us examine the matter. "Looking at the usual asylum building, it is found to consist of several stories or "flats," piled one upon the other, internally spaced off into rooms, stairways, and corridors. Owing to its height, in order to be self-sustaining, its walls must be of extra thickness, which necessitates the using of an immense amount of material not called for in small buildings. The corridors referred to (I speak of the wings), from which open all the rooms and places of exit from the ward, take up, together with the extra stairs needed in high buildings, about one-third of the entire room; that is to say, the building has to be so much larger than it otherwise would be except for this corridor space. But, it

will be asked, Is this corridor of no use in a ward except as a means by which to connect its parts with another? Does it not serve in the place of a day-room, thus saving the space which would, but for this, be devoted to the use of patients? Very true, it may do all this; and why not, since we cannot avoid having this room at our command in the present style of building? But in the modern asylum or hospital, day-rooms are supposed to be provided, and of a size sufficient for the purpose; yet, owing to the crowded condition of state institutions generally, we find that many of the day-rooms are turned into sleeping-rooms, thus forcing the patients into the corridor, which, being walled in as it were, is an unpleasant, dreary, monotonous place in the extreme. On the other hand, in those wards where the day-room is put to its legitimate use, the corridor becomes a superfluous element, nevertheless an architectural necessity under the present arrangement.

"Now what I contend for is, that these detached buildings can be so planned as to avoid the necessity of corridors, which, as before stated, will reduce the area of the building one-third. * * *

"But this is not all. So far I have compared with one another that part of the institution occupied by patients. Carrying the same principles of construction to the central, or executive group * * *, we are able to save in this part * * * a large item of expense. The center or executive building of our asylums * * * is built upon its present gigantic scale, not because it is all needed for the purpose of transacting the business of the institution—as a much smaller building would be ample for this—but because the architectural design of the structure demands it; there must be the proper architectural relation between the center and its wings."*

Owing to separation, it may be thought that these buildings would not be visited as often as would be desirable, by the medical officers. The physician, if he has an interest in his calling, and this his chosen specialty, will not let an occasional storm and a few additional steps interfere with duty. But it will be found on narrowing down the question, that the difficulties are really no greater. "The remote wings of completed asylums are as difficult to reach, taking into account the stairs to climb, as the detached buildings would be, generally speaking."† Patients needing frequent visitation would be placed in that part of the institution nearest the central group.

* The writer, in Annual Report of Kansas State Board of Commissioners of Public Charities, 1874. † Ib.

In segregation, facilities for chapel exercises and amusements not being under the same roof for all, but at the central group, it may be thought that much difficulty would attend getting patients out to these entertainments, etc. The obstacles are less formidable than at first sight might appear. The additional amount of labor would be small, consisting only in attiring patients in their walking habit, and taking them out of doors. But this is the practice at all institutions to give the inmates exercise in outdoor walking; and whatever benefit results from it would follow of course as much in in the one case as in the other. Interruptions, it is admitted, will occur sometimes on account of inclement weather ; but, in the matter of amusements, an occasional break is not so momentous a thing as we might be led to suppose. As for the sick and the too feeble, the number of this class is small ; besides, the amusement-room is not the place for them.

Another imagined difficulty would be in regard to transferring patients from one part of the institution to another, under the erroneous supposition that it was done to any extent. Ready communicability between headquarters and detached parts of the establishment, is a desirable feature to be sure; but it will be found as easy of attainment in segregation as in the almost endless labyrinths of some of the more recent buildings.

In "close" asylums, the distribution of food and clothing, and other supplies, is done by the aid of machinery. Dispensing with this means in segregation, it is natural to infer in carrying on the internal affairs of the institution, that a large increase of help would be called for.

One unacquainted with the usages of asylums would be surprised at the exceedingly small number of inmates who do not participate one way or another, not only in the ward household work, but in other parts of the establishment, and in the care of their own persons. Yet, after all, throwing out the very few who are steady workers, it is only a small portion of the time that the patients are thus employed, the remaining time being passed by the great mass in idleness—and this by the necessities of the case. Let the visitor enter the wards by nine o'clock in the morning, and everything will be found in complete inspection order. Here is a vast ward space in which are living from thirty to forty patients in the care of two attendants, the usual proportion in state asylums. How would it be possible for these two persons to effect such results without the aid of their patients ?

It is here seen that in so far as the circumstances will admit, in a certain sense, the insane can be made self-supporting. But in our modern institution their field of employment is limited. Machinery comes in and forces them into idleness, by taking from their hands precisely the kind of labor they could easily perform and profit by. In segregation, instead of their wants being served by the aid of so much machinery, they would be taught to wait on themselves; for here there would be left more for them to do, and the work would be such as they had been accustomed to, and could still perform. Here, then, we have the question solved. In our "family" system, in each household will be found in the inmates themselves the very element needed for the task of caring for their own and each other's wants.*

Segregation admits of more speedy construction and occupancy. The work may begin by the erection of a single building for each sex. These buildings being of moderate size—yet possessing all that is requisite for the care and treatment of those who are to occupy them—could be completed within a single season; and in this way the work would proceed, each year adding one or more, as the necessities of the case would demand.

Many will doubtless think that before insane patients could be cared for, extensive preparations in the way of administrative buildings would be needed. The difficulties of the matter are somewhat apt to be exaggerated. As stated on a previous page, the executive part of our establishments, so far as size is concerned, is more the outgrowth of an architectural requirement than a real necessity. Institutions for insane are not hotels. Unlike the latter, whose population daily fluctuates largely, our insane household is more fixed. Besides, in the detached plan, executive facilities would be embodied in each section, and until several were completed the central group need not be even commenced. In the building of any large structure, especially those intended for charitable purposes, if created at the public expense, it is the exception when alterations more or less extensive are not made before or

* At the Connecticut Hospital for the Insane, since 1871, thirty patients (the average number in the hospital wards) of the chronic class, have lived, with their attendants, in two outlying houses, situated two or three minutes' walk from the main building. The carrying of the food and supplies, and clothing to and from the laundry, has been done by two patients. They are generally accompanied by an attendant; but frequently they perform this duty alone; and, in addition to this work, assist in other ways.

after completion, on account of unforeseen errors in the plan; and changes, whenever made in works of a massive and complicated character, such for example as asylum buildings, are always attended with difficulty, and, moreover, are tremendously expensive. The converse is true in segregation, for the cost attending alterations and repairs of buildings decreases in direct ratio with size and simplicity.

This plan admits of a pleasing diversity as respects location of buildings and of individual design. Differing from the "close" hospital, which in architecture has to conform to symmetry, segregation allows of a more ready adaptability of the buildings to the lay of the ground and variation in architectural style to a greater or less degree, thereby lessening the monotony of sameness—a thing which we in asylums are ever striving in numerous ways to diminish. Each building standing distinct by itself would preserve its own individuality; and, moreover, unlike the too frequent prison-like looking structure, would present in its home-like appearance something not repelling, but inviting to those who needed some other than home care.

It also involves small annual outlay; no extensive building operations going on at any one time, insuring thoroughness of work and a saving in interest on funds expended. To begin and carry out our family plan to full completion by the method of yearly expansion would require an annual expenditure never exceeding a quarter to a third of the amount usually required; and at the end of the first season's labor the practical work of the institution begins.

To complete an asylum on the old plan is the work of several years, calling for annual appropriations of sums seldom less than one hundred and fifty thousand dollars; and, as a simple calculation will show, the interest on the amount thus locked up and unavailable for practical use, would be sufficient to set and keep in motion to the end, our system of segregation. Indeed, on several asylums now in process of erection, the expenses are so enormous that the interest alone would permit of a renewal of our system on sanitary grounds, if need be, every ten years.

Current expenses would be less, as a comparatively small amount of skilled labor would be required, as in segregation the complicated machinery necessary in large institutions is dispensed with. In the matter of heating, also, there are times when warmth is needed only in particular parts of the establishment. In the large building, in order to get what little may be needed, the whole heating apparatus must be set in motion. Our small buildings we

can so adapt as to admit of certain portions being warmed without wasting heat on other parts. Again, in the "close" hospital, the plan is such that the whole extent of the dormitory space is unavoidably used by the inmates in connection with the day-room space—a thing not at all essential to their well-being—and these sleeping apartments, opening as they do into the day space, take more than half the heat required were the patients differently situated. No such waste would occur in our "family" buildings, for the reason, as stated elsewhere, they can be planned differently.

The danger from fire would be less, and the aggregate loss, either of life or property, would not be as great, should a conflagration occur. Scarcely a whole year passes that does not witness the destruction by fire, in part or in whole, of some charitable institution; and asylums for the insane by no means escape. In this country, several of these buildings have been destroyed in this way, in great part, with loss of life. No such waste of life and property would happen in detached buildings; no patients would be above the second story, and in case of fire their exit from the building would be a simple affair, compared with the difficulties which would be encountered under like circumstances in a many-storied structure; and more than one building at a time would not be likely to burn.

More perfect sanitation can be attained in segregation. In any large building filled with human beings, defects existing in the sewerage system, water supply, the heating apparatus, etc., affect more or less the health, comfort, in short the well-being of the whole institution. The same evil is experienced in case of the outbreak of an epidemic. In detachment, each family is distinct from the others, and equally unconnected with any other; and with no more than the ordinary expense, the sewerage, and if rightly planned, to a great extent the water supply, may be so that defects occurring at any one section would inconvenience and endanger no other. An important factor in preserving the health of our patients, is out-door life. Except to a limited extent, the bringing of this about in the prevailing system is attended with no slight inconvenience, owing to difficulty of egress. Our two-story buildings being planned so as to permit of bringing the patients, during the day, to the ground floor, they would be of easy access and egress from the house, readily effected without the necessity of traversing interminable corridors and stairways. Furthermore, that is an unsanitary state of things in a system which, by the very form of its architecture, compels the inhabiting, by day as well as by night, of our bedrooms. Now this is true

in great part, of insane asylums; and in order to dispel from the wards the sleeping-room odor, expensive ventilating machinery is brought into use.

The method admits of a more perfect classification. In the "close" hospital, classification is defective—too restricted—because it admits of none except that based on mental condition alone. In addition to that just named, segregation provides for the entire separation of certain classes, whose association with other insane is considered by all Superintendents to be extremely objectionable. They are as follows, viz: the epileptics; the imbeciles; criminal insane; the inebriates; colored insane; the aged and infirm. A more thorough classification in respect of social condition, can be attained; for in state asylums, which are always overcrowded, there is of necessity a mingling of all social grades.

We come now to a brief consideration of institutions solely for the chronic insane.

This method, like the Cottage or Family system, has always been opposed for various but wholly inadequate reasons, at least in the opinion of the writer. It is affirmed that in thus providing for the chronic class, the standard of treatment will be lowered; and the reason given is this: owing to the fact that there is lacking in the chronic, but present in the acute case, that hope of cure, which, for the physician, is the incentive to the best professional effort; hence the danger of neglect.

To assume such neglect, is no answer to the argument. In the conduct of these establishments is there any reason to suppose that professional pride is going to be so suddenly lost, and professional skill left dormant? In submitting it, as has to be done, at the hands of Boards of Charities, to frequent comparison with kindred institutions, would or would not the physician so direct his energies that results might tell in its favor?

In the treatment of insanity, whether acute or chronic, the great thing potent above all others, is that called moral—the regulating influence that institutions exercise over the lives of their inmates which "improves" and "restores" them. A large proportion of those discharged from asylums are characterized as "improved;" and this class is made up of a goodly number of cases brought to the asylum after chronicity, but the institution discipline has improved and partly restored them. Moreover, what have been the results at the Willard Asylum, an institution for the chronic insane? The ratio of discharged, recovered, and improved, together, to admissions, has been over six per cent. This last fact alone,

then, would seem to indicate that at these places there is yet work for the physician.

Again, it is said, that placed in an institution of this kind, its effect on the patients themselves would be pernicious, being conscious now of the brand "incurability;" while in the general asylum, occasionally seeing the recovery of a fellow inmate, they are thereby inspired with greater hope concerning their own prospects.

We are not informed as to the proportion of the chronic class that is so keenly alive and discriminating just here; if it be a large one, the assertion might carry with it some force, and the objection would be well taken. It is our experience, however, that the great mass of the chronic insane are as indifferent in regard to this particular matter as the life-long imbecile. But what is the logic of the thing? If we endow the chronic lunatic with reasoning power here, why may we not, on the other hand, do the same in respect of the recent case, and with as much reason affirm that they likewise experience injury in witnessing, as they do, *incurability* in so many of their associates?

From these remarks on separate institutions for this class, it may be inferred that a special plea is made for their establishment. Not necessarily so. If in any community the necessity for one existed, I would favor it. I would oppose them under all circumstances if they cannot take rank in organization with other institutions for the insane; for, unless put upon the same plane of medical management, they are apt to sink into and become mere exaggerated poor-houses.

At this juncture it may be noted in passing, that what has been said concerning provision for the insane on the plan of segregation, is equally applicable in the case of other classes of dependents,—the blind, deaf and dumb, orphan asylums, reformatory institutions, etc., (to say nothing of hospitals for the sick)—for here, as well as in the former, like defects abound on every side.*

In conclusion, then, I ask, in the establishment of charities is there not abundant opportunity for the display of higher and grander forms of æsthetic taste in public buildings other than those designed as the home and shelter of the poor? If artistic effect is desired, ornamentation is essential, involving heavy expenditure—while if extreme plainness is to prevail, the very form of structure (asylum) defeats architectural success, and impresses gloom and repugnance.

* Concerning some of the above classes, this new departure has already taken form in several places.

VAGINAL LACERATIONS FROM PARTURITION.

M. Storrs, M. D., Hartford, Conn.

It is not the purpose of this paper to attempt any full discussion of this subject. These vaginal lacerations are many and complicated. We find upon the urinary side the urethro-vaginal, the vesico-vaginal, and the vesico-uterine fistulæ. The variety is still further increased by the combination into which any two or more of these simple rents may enter, sometimes with great loss of substance, sometimes involving the ureters, and often causing abnormal conditions from adhesions, contractions, and so on.

Upon the rectal side we have the perineal ruptures and fissures of the septum, and their combination.

We shall relate some illustrative cases, those of more common occurrence, accompanied with some remarks upon such points of interest as are naturally suggested.

As preliminary, we may say that, according to the testimony of some physicians, these accidents are not very frequent; some have never met with them, while others, and especially those in surgical practice, encounter them quite frequently. They are, to say the least, unpleasant cases, and if preventable, or if timely and appropriate measures have not been adopted, embarrassing and mortifying.

For some of these accidents surgery had little to offer until the present quarter of the century. It was not more than twenty-five years ago that Velpeau said in regard to fistulæ of the bas-fond of the bladder, that "there is no fact up to the present time which proves indisputably that they have ever been cured." Syme, in his "Principles of Surgery," published in 1856, makes no mention of this accident, and Fergusson, in his work of 1857, gives it only a line.

At the present time these deplorable injuries are skillfully treated, and either greatly relieved or perfectly cured. Still, not-

withstanding these great successes, failures occur, and our apology for presenting these cases is the frequency of these failures. Several have come to our knowledge during the past year, and some of them have occurred under the care of the more distinguished in the profession. Now any method of treatment, or any detail of treatment, which secures success more certainly, is the practical lesson which we need to learn.

Case I. An American woman, æt. 25, was confined with her second child, Oct., 1875. Her first labor was reported as difficult; instruments used; child still-born.

This second labor was also severe. At the end of twenty-four hours the pains ceased; head resting upon perinæum. She was allowed to remain in this condition for five days, when counsel was called; forceps applied, and a decomposing fœtus was taken away. After delivery it was impossible to keep the bed dry; soon it became evident that urine was dribbling. But for three weeks it was supposed to be incontinence, and was so treated; Tr. Nucis Vom. and Cantharides being used without any appreciable benefit. The consulting physician was again called, and, on making an examination, found a fistula well up in the bladder.

The patient, in the December following, three months after the accident, was placed under the care of a distinguished surgeon for an operation. The case was dismissed with an aperture remaining, the surgeon giving it as his opinion that time would close the opening; but the dribbling continuing, I was called to complete the operation, April 17th, a year ago.

I found the patient discouraged, shy, and sensitive from her loathsome condition. She had the strong urinous smell. There was almost constant dribbling, excoriation of the thighs, vagina tender, and lined with urinary concretions. The fistula, located in the bas-fond of the bladder, was a large vertical opening, somewhat oval, about one and a quarter inches in length, and about half an inch in breadth. The edges were rough and indurated, and the remote or upper extremity black and sloughing. There was no eversion of the mucous membrane of the bladder, no atresia of the vagina, or vaginal bands. To all appearances the operation had been wholly unsuccessful. I gave it as my opinion that no operation should at once be undertaken. The irritation of the vagina should first be relieved, which the use of the catheter and cleansing vaginal injections would accomplish. There were, however, urgent considerations for an immediate operation. Ether was given. The patient was placed upon her left side, well over upon her breast, and the thighs drawn up. The part was brought to view by the duck-bill speculum, and held down by the forceps and tenaculum. The paring was done with the scissors and knife, endeavoring as much as

possible to avoid the mucous coat of the bladder, yet very likely it was touched, as we had considerable hemorrhage, which caused some delay.

After paring the orifice, and carefully removing all the blood from the vagina and bladder, we introduced six iron wire sutures, made of wire of the size known to the trade as No. 30. [The needle used was the hollow one, seen in the accompanying cut.]

The bladder was injected, and there was a slight leak. Two more sutures were inserted, and the union was perfect. Sims' sigmoid flexible metallic catheter was introduced, to be removed each day for cleaning.

The operation had taken altogether about two hours. I was obliged to leave the patient before she had awakened from the ether. I left her in the care of her husband, who had been trained in the previous operation in the use of the catheter, of opiates, and in regard to the position of the patient, etc. I received a letter from him at the end of a week, stating that every thing was right; that there was no sickness from the ether; that pain had been moderate, and that not a drop of urine had escaped from the vagina. Another week brought a like favorable report. Four weeks from the time of the operation, I visited her to remove the sutures. The result was a perfect union, a good healthy cicatricial line, and when the bladder was injected with water, none escaped at any point.

It is now a year since the operation. Not a drop of urine has been known to escape. There is a slight inability of the bladder to retain the urine, obliging her to rise during the night, but this difficulty is diminishing. It is due to the lessened elasticity or expansibility of the bladder, having become contracted during the period of dribbling. Time will measurably overcome this.

Remarks.—One point of interest in this case relates to the cause of the accident. The attending physician, now dead, believed that it was due to the instruments used; the consulting physician, to the length of the labor, long pressure of the head. This is the question generally raised.

The delay in this case was inexcusable—head resting five days on the perinæum! The statement of the one who delivered is, that the use of the instruments was only partial; that one blade

was introduced easily, and when the hand was guiding the second, pain came on, and with one blade and the hand the dead fœtus was removed. The immediate dribbling indicates pressure of the head rather than that of the instruments. Generally the urine comes away a few days after labor, from whatever cause the injury may have been produced, when the sloughing occurs. The length of this labor covered the ordinary period of sloughing.

Another point of interest is the appropriate treatment to be at once adopted. To give remedies for three weeks is useless. But putting the patient in a favorable position, and keeping the urine entirely out of the wound by the retention of the catheter, a recovery in a small fissure may be looked for. We would call attention also to the sutures used. Probably the success of one operation over the other was due more to the sutures than anything else. As we were informed, only three were inserted in the first operation ; but the urine dribbled from the start. As already stated, we inserted eight before the leak was stopped, and they were applied with some force, for a loop which embraced one-half of an inch of tissue on each side, was brought down to a loop of one-quarter of an inch. No matter how well we have prepared our opening, and attend to all other details, yet if our sutures do not command the opening, and urine works its way through into the vagina, we must expect more or less of failure. Again, we used, and have more confidence in, small-sized wire. A greater number of sutures may be required. The wire is passed through the tissues on each side, underneath the mucous coat of the bladder. The twist compresses for a time the included tissue, and sooner or later some portion of this tissue will be divided. If the wire is fine, less room will be given for any small quantity of urine which might happen to get underneath the mucous coat, to work its way into and around the suture openings, producing as many ulcerated points. The principle involved is to the suture what the capillary trocar is to the ordinary one. There is, also, less danger of strangulating the inclosed tissue by small wire, for it would sooner cut its way through into a position of rest and equilibrium. It may be claimed that four weeks is an unnecessarily long time to retain the stitches. Had the patient been under observation, we might have removed them sooner. But no harm could come from such fine wire underneath, or exterior, to the inner membrane of the bladder. When removed, there was no irritation or ulceration seen, and no erosion of the wires.

The management of the catheter is another important point. In the first operation, we are told that it was not removed for two weeks. It became choked, and urine passed alongside it. We directed it to be removed and cleaned daily. Had the fissure been located in the urethra, or at the junction of the urethra with the bladder, the introduction of the catheter in the hands of a layman might have been disturbing. But located high up, little danger was to be feared. We would not, as a rule, operate without having our patient in a better state of preparation. Yet we believe that the state of the general system is of more importance than the local condition. When, as in this case, the general health is fair, we may lose in the care and anxiety awaiting an operation as much as we should gain by preparatory treatment. As the womb does not rebel to great surgical violence when long accustomed to the presence of some diseased growth, so the vagina and bladder, in this case, seemed to have greater tolerance from their abnormal condition.

Our remaks do not apply to those cases where there are local impediments, such as contractions, and vaginal bands which require adjustment before the operation proper begins.

Case II. An American woman, aged thirty years, residing in Massachusetts; confined June 1, 1876; primipara; labor difficult; terminated with instruments; perinæum lacerated. On the following day six perineal sutures were inserted; no union. March 10th, ten months after confinement, I was called to the case. Found the perinæum, external sphincter, and lower border of the septum divided, making a complicated laceration. The anus was drawn by the sphincter towards the coccyx, and each side of the perinæum was drawn down towards the ramus of the ischium by the muscles, which had lost their antagonism in the torn raphe. A large opening was presented, reaching almost from coccyx to pubes, a common passage-way, a cloaca through which the contents of the bowels found their escape without let or hindrance. The channel of the vagina was shortened, first, by the muscles named, and, second, by the descent of the parts above, producing rectocele, cystocele, and procidentia. The patient was excluded from society, life was a burden and a nuisance.

Operation. The bowels having been well evacuated, the patient was placed upon the back, and each side was denuded to an extent equal to the perineal rent, also the septum about three-fourths of an inch, triangularly in shape, apex above. Iron-wire sutures were introduced into the three natural lines of union, embracing the divided parts without any strained violence, and always exerting their force in the right

direction. Eight were put into the vaginal, three into the rectal, and four into the perineal line. The knees were tied together; tube placed in the rectum; nurse directed to carefully draw the water night and morning. Bowels were confined by pills of opium.

Perineal stitches were removed in about a week; some of the deep vaginal remained three weeks. Union in all the lines was found complete, except a recto-vaginal opening the size of a small probe, about two inches from the vaginal orifice. This was the result of the partial use of the rectal tube. Some firmness is needed to make the patient willing to use the tube. Keeping the bowels confined, and using the tube two or three days longer, this small opening was closed, and the union was complete. Bowels were moved at the end of twenty-four days.

Remarks. This method of operating is like the one described in Ziemssen. I had operated in the same manner before the appearance of that work. The plan has advantages over the more usual one of relying altogether upon the perineal or horizontal sutures, whether quilled or interrupted.

In the deep-seated, horizontal suture, the direction of the force is such as to drag the deep parts forward and away from the septum, a thing to be avoided.

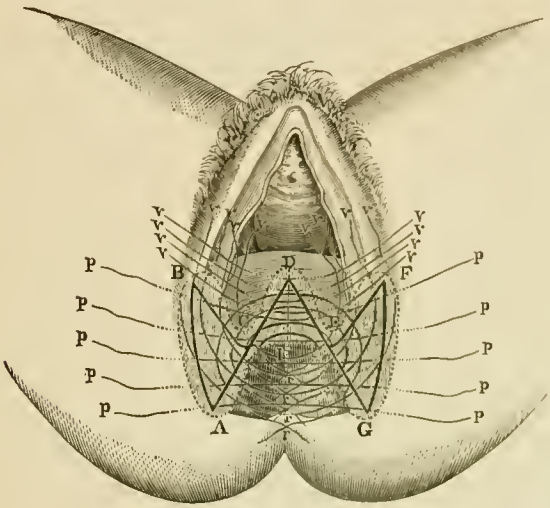
There is more yielding in the case of a large-looped suture, and hence the sides of the perineal surface are not as securely held. The loop of our sutures being smaller, loosens less quickly. Another consideration of importance is, that we have a triple line of union; securing two of which lines, we shall be successful. The perineal suture alone may furnish a closing for that line, but a fistula, perineal, or recto-vaginal, is more likely to remain. This is produced by imperfect apposition. Fluids in the vagina work their way through the vaginal line, and gases in the rectum work through the rectal line. Wind and water are our foes. To guard against them, our vaginal line must be water-tight, and our rectal line air-tight. Supplement this with care in the use of the catheter and rectal tube, and an opening will seldom remain. We would emphasize the use of the rectal tube. We have seen great suffering without it—a woman expressing herself as bursting.

The preceding operation may be illustrated by the accompanying diagram.

Let the triangles A B C and G E F, represent the sides of the divided but now denuded perinæum. The triangle C D E, the denuded angle of septum. The pared surface is really the space included within the dotted lines around the triangles. The curved

line A I G, will vary as more or less of the septum is divided. If only the external sphincter is divided, it will be slightly curved; and then the lines A C and G E will be wanting.

Let *v v* represent the vaginal, *r r* the rectal, and *p p* the perineal suture.



First twist the *v v* suture, inserted in the angle of the septum so as to include half an inch of tissue on each side, as far as the point I, where the lines C D and E D meet. Then alternate the remaining vaginal with the rectal sutures where the lines A C and G C meet, so as to make the rectal continuation of the line D I and the lines B C and F E meet, so as to make the vaginal continuation of the line D I; the whole vaginal line being formed by the union of B C D and F E D. After the twisting of the vaginal and rectal sutures, the perineal line is formed by twisting the *p p* suture, bringing the lines A B and G F together.

Case III. An American woman, æt. 19, confined Jan. 26. Primipara. Had frightful convulsions through the day; late in the afternoon the child was turned and delivered. Perinæum ruptured, though not perceived at the time. Called to operate March 17; found the laceration much as in the case just described. The operation was performed in the same manner; vaginal sutures removed sixteen days after the operation; the vaginal and perineal lines closed, the rectal granulating.

Result successful.

Remarks.—The cause of this rupture—the only case ever occurring in our hands—was, undoubtedly, hurried delivery. The life of the mother and child seemed to depend upon promptness. The perinæum may have been unusually fragile, as there was great œdema of the parts. In the other case of ruptured perinæum which we have related, instruments may have added to the danger. But the chief cause, in our opinion, was an anatomical one ; a perinæum of more than average breadth, and approaching relatively nearer to the pubes. I gave this opinion to the patient, an intelligent person, and her reply was, that she knew from observation that this was true. The perinæum varies in breadth and in its relative position to the coccyx and pubes. Those women who have the perinæum narrow, and nearer to the coccyx, are seldom ruptured.

Time of Operation.—The rule is pretty well established to operate immediately, or wait for some weeks or months ; some say until the time of weaning. In the first case of perineal rupture related, the operation failed when done on the second day. In the other case we succeeded six weeks after labor. If the suffering and inconvenience had been less, we would have postponed the operation, for the general condition was bad, and the parts were soft and flabby. Failure might have been expected.

These cases have been presented as examples of the more common vaginal lacerations from parturition. Two cases had submitted to previous operations without success, the other was an unpromising case in every particular. We have pointed out what, in our judgment, were the reasons for failure. The success, finally attained, we ascribe to the method of operation, joined to an average carefulness in all the matters of detail.

BIGRAPHICAL SKETCHES

OF THE ORIGINAL MEMBERS OF THE

MIDDLESEX COUNTY MEDICAL SOCIETY,

READ AT THE

EIGHTY-SIXTH ANNUAL MEETING,

APRIL, 1877.

RUFUS W. MATHEWSON, M. D., Durham.

That we may better understand the professional standing of the men who organized this society eighty-five years ago, let us briefly review the previous medical history of the territory, which, seven years before, had been incorporated into this county. It was here that the "Clerical Physicians" instituted the reform in teaching and practice, which resulted in the elevation of the profession throughout the colony to a proper standard.

Jared Eliot, the father of the regular practice in this county, was a son of the minister of Guilford, and grandson of the apostle, John Eliot. He graduated at Yale College in 1705, while the institution was located at Saybrook, which at that time belonged to New London County, and spent his whole professional life in Clinton, then Killingworth, in the same county. He was assisted and succeeded by his pupil and son-in-law, Dr. Benjamin Gale, who graduated at Yale in 1733, making that place for three-quarters of a century the great resort for medical instruction, equal in importance for that period to any of the cities for the present day. Drs. Jared Potter and Elihu Tudor were educated there. It was there that the first medical treatise was published in the colony in 1750 by Dr. Gale ; and in 1788 "Cases and Observations" by the same: all of which were favorably noticed in Europe.

Dr. Eliot had eleven children. The first, a daughter, died young. The second, Hannah, married Dr. Gale, and had eight children, most of whom died young. The third, Samuel, graduated at Yale, 1735, studied medicine, and died on a voyage to Africa for his health in 1741. The fourth, Aaron, studied medicine, married a daughter of Rev. Wm. Worthington of Westbrook, and settled in his native place as physician and merchant. He was a Judge, a Colonel, a Deacon, and one of his Majesty's justices. He was engaged largely in the manufacture of steel. In a petition to the Colonial Assembly for pecuniary aid to carry on the work to better advantage, it was claimed that he supplied the colony and other governments with steel. The sum of £500 was voted for three years without interest; when due, an extension of two years was granted on account of a large loss of steel by fire in Boston. He had three sons who studied medicine mostly with their uncle, Dr. Benjamin Gale. One of them married a daughter of Dr. John Ely. They all settled in the new clearings at the West. Dr. Jared Eliot's fifth child, Samuel, (Yale, 1740,) studied medicine, and died at Saybrook in 1747, unmarried. He had six other sons, neither of whom studied medicine or divinity.

Dr. Gale's second daughter married Jeremiah Atwater of New Haven. Mary, the third, was the second wife of Dr. John Redfield of Guilford. Juliana, the fourth, married Leverett, son of Dr. Leverett Hubbard of New Haven, and had a son Leverett, who was the only grandchild of Dr. Gale who survived him.

Dr. Eliot was pastor of the church in Clinton for forty years, hardly failing to preach a single Sabbath. In his preaching, plain and familiar, happy in allusions to Scriptures, and abounding in original and laconic expressions. In history, natural philosophy, botany, and mineralogy, he excelled. He died in 1763, aged 78 years.

Dr. Gale built the first story of the stone tavern at Clinton, inside of which was another stone house, two stories high, constituting a house within a house, constructed in a way to withstand the general conflagration. The upper story of the inner house, it was supposed, was used for anatomical purposes, and for meditation and study of the Scriptures on which he wrote largely. After the doctor's death, the inner house was removed, and another story added to the outer walls. He was buried in the cemetery north of his house, at right angles with other graves, his feet towards the south, so that when he arose, he would face

his former home. From his monument we read: "In memory of Dr. Benjamin Gale, who, after a life of usefulness in his profession, and a laborious study of the Prophecies, fell asleep May 6th, A. D., 1790, Aet. 75, fully expecting to rise again under the Messiah, and to reign with him on earth. I know that my Redeemer liveth, and that he shall stand at the latter day upon the earth, and mine eyes shall behold him."

Dr. Gale, it appears, held to the old doctrine of the millenarians, who believed that the second coming of Christ will precede the millenium, and that there will be a literal resurrection of the saints, who will reign with Christ on earth a thousand years. He expected to rise in 1804.

Dr. Phineas Fiske was a son of Dr. John Fiske of Milford, one of the most noted physicians in the colony. He graduated at Yale College, at its third commencement, and two years in advance of Dr. Eliot, yet having spent six years as a tutor in that institution, he did not commence practice as soon. He was cotemporary with, and equal to Dr. Eliot, but the misfortune was he did not live as long. He was settled as a minister at Haddam, then in Hartford county, where he died in 1738. Samuel, son of Dr. Fiske, graduated at Yale in 1743, and died while a tutor.

Dr. Moses Bartlett of Madison (Yale, 1730) studied both professions with Dr. Fiske, married the daughter of his preceptor, and settled at East Middletown, now Portland, where he died in 1766. A monument was erected to his memory near the quarries by his parishioners, on which is inscribed: "He was a sound and faithful divine, a physician of soul and body."

Dr. Bartlett had three sons—Moses, (Yale, 1763,) Phineas, and Elihu (Yale, 1764). The two former studied medicine with Dr. Gale. Moses succeeded to his father's practice in Portland, surviving him for forty years; he was a deacon in the church. Phineas settled at Ashfield, Mass. Elihu died young, without a profession.

The foregoing includes those clerical physicians of this county to whom the profession is so much indebted for its advanced standing. All the sons of the clerical physicians who studied a profession, took to medicine: not one to the ministry. At the time this society was organized, there were but two medical colleges on this side of the Atlantic; and those had not fairly become established institutions. Not one of these original members had enjoyed advantages of medical college instruction, but

they were confined to private teaching. Each physician constituted a faculty to teach, and an examining and licensing board.

Several of the members of this society made professional teaching a specialty. Doctors had to be prepared for the new frontier settlements. They were like the medicines—hand-made. Steam and machinery had not come into use. The candidate "served his time," as it was then called, which was divided between the books on the shelf, the skeleton in the closet, the pestle and pill-slab in the back room, roaming the forests and fields for roots and herbs, and following, astride of the colt he was breaking, the horse which was honored with the saddle-bags.

The practice of inoculation was at its height at the time this society was organized, and was a source of great income to many of the members. The keeping of pock-houses (as they were called) was profitable. The location of these can generally be traced by the graves of the patients in the fields adjoining. Jenner's great discovery was not made until after this society had been in existence several years.

Dr. Jesse Cole was a physician in Durham at the time this society was organized; he was not a member, as Durham belonged to New Haven county, till some years afterwards. He was born at Kensington, 1739; was a son of Mathew Cole and Ruth Hubbard; settled in Durham in 1765, and did a large and successful business till 1793, when he became involved in a suit against his son by the town, which he zealously but unsuccessfully defended, when he removed to Southington, and, in 1803, to Wolcott. He died in 1811, leaving eight children.

Dr. Cole, it is said, had two pills that he relied on, one of which he called the black dog, and the other the white dog. If the black dog failed, he would send the white dog into the stomach of the patient.

On the south side of Mount Pisgah, in Durham, he cultivated rare plants and herbs, which still bears the name of Dr. Cole's garden. He was engaged at one time in the manufacture of potash, on what is now called Potash Brook and Potash Hill.

Dr. Mathew Cole (Yale, 1783,) and Moses Gaylord were students of Dr. Cole.

Dr. Thayer located in Durham before Dr. Cole left; he, with Dr. Gaylord, has been spoken of by Dr. Bronson. (See physicians of New Haven county.)

Dr. John Osborn was the only one of the forty-seven incorporators of the Connecticut Medical Society residing in this county, and it devolved on him by the charter to organize the county society. He was the first chairman of the county meeting, and the first treasurer of the State society. He was re-elected Fellow each year as long as he remained a member, also as one of the committee of examination for the county.

The Osborn family furnishes a rare instance of superior talent being transmitted from generation to generation for nearly two centuries. The Rev. Samuel Osborn was born near Belfast, in the north of Ireland, of Scotch parents. He emigrated to Cape Cod about the first of the last century, and was pastor of the South Church of Christ at Eastham, where he gave dissatisfaction to his Antinomian parishioners by the liberality of his preaching. In a communication, dated in 1737, from members of his church, who style themselves his "aggrieved brethren," he is accused of doctrinal errors. To these charges he made an able defense, a copy of which is still kept by the family as a valued legacy. Rather than yield his convictions, he resigned his position and retired from the ministry in destitute circumstances, with a large family on his hands.

Dr. John Osborn, the first of the name in Middletown, was born in Sandwich, Mass., the town of which our chairman, Dr. Nye, is a native. He graduated at Harvard in 1735, when he was offered a tutorship, which he declined, with a view, probably, of becoming, like his father, a Presbyterian minister. When in college he was distinguished for mathematical investigations, and Latin verses, which were much admired by the faculty. It was while in college he wrote the elegy on the death of a sister, which has been copied by Dr. Field in his Middletown centennial address. After leaving college he wrote the "Whaling Song," a copy of which may be found in Barber's Connecticut Historical Collections.

The son, whose views were in accordance with his father's, was induced to give up the ministry, and turn his attention to medicine. The misfortune of the Osborns seems to have been that they were a century in advance of the times in their religious belief, and their sentiments of toleration.

It is to these differences with the sons of the pilgrims, that the medical profession is indebted for five generations of able members, and the Episcopal church for large accessions of true churchmen.

Dr. Osborn, about 1739, removed to Middletown, where he soon felt the cold shoulder of the pastor of the only church then in Middletown, the Rev. William Russell, who did not show favor to the new physician. In a letter, dated at Middletown, in 1741, the doctor says: "It is true, as you have heard, that I am a favourer of the principles of the church of England, which I believe has hindered me of some money, for the people here have more faith in their teacher than ever the Jews had in Moses, and he has had a jealousy of me, and has laid me under great obligations by kindness to me in the backward way." Whether the conduct of the pastor was a cause or a consequence of Dr. Osborn's going over to Episcopacy, is not apparent at this late day.

The doctor at that time had under consideration the purpose of going to England to receive holy orders, from which he was probably diverted by the state of his health, and by his pecuniary circumstances. He was one of the fathers of Episcopacy in Middletown, and can be said to have been present at its birth, and lent a helping hand. He lived to see Christ Church, the first Episcopal church in this county, consecrated, and was one of its first board of officers. He died of consumption, in 1753, aged 40 years.

Dr. Osborn shared the practice of Middletown with Dr. John Arnold, who, with his brother Joshua, of Middle Haddam, were students of Dr. Fiske, the former died in 1754, having had two wives and fifteen children, and with Dr. Abijah Moores, who died of small-pox in 1759, having been the father of twelve children, succeeded by Dr. John Dickinson, who left the profession for public life. Dr. Eliot Rawson, a descendant of the noted secretary of Massachusetts, removed from East Haddam to Middletown about the time Dr. Osborn's health began to fail.

John Osborn, the second of that name, was about thirteen years old at the time of his father's death. We do not learn that he possessed any extra advantages for a classical education. He early entered the office of the celebrated Norman Morrison, in Hartford, to study medicine. Dr. Morrison was educated at the University of Edinburgh, and was one of the first professional teachers in the colony who had possessed the advantages of a medical college education. John Osborn and Alexander Wolcott, son of the Governor, were considered the most distinguished of all his students. In 1758, before the former had attained his majority, he went with the army that attacked Ticonderoga, in the second French war, and in a subordinate capacity was in the medical department of the provincial troops.

The Osborns were hereditarily haters of France, and lovers of England. If Dr. Osborn ever worshiped the likeness of anything in the earth beneath, it was the British crown. It was for this reason that his valuable services were not made available during the Revolutionary War. About 1763 he commenced practice in Middletown, where he followed the profession more than sixty years. In 1764 he married Ruth, daughter of Dea. Isaac White, of Middletown Upper Houses, now Cromwell, first cousin of Hugh White, who settled Whitestown, N. Y. With her he lived for half a century, and had seven children. He was a man of extensive reading, and for some time possessed the best medical library in the State. His knowledge of *materia medica* was extensive and accurate; he excelled in chemistry; he exerted himself to remove the prejudices against inoculation for the small-pox, and to improve the treatment of that distressing disease. About twelve hundred persons were inoculated in Middletown during the winters of 1777 and '78. He was a very thorough teacher of medicine, and the character of such physicians as Moses F. Coggswell, his sons Prof. John C. and Dr. Samuel, as also Dr. Thomas Minor, attest the thoroughness of his training. "As a practitioner he was eminent. He appreciated the worth of well-bred and faithful physicians, but held quackery in the utmost abhorrence. He had great sensibility, quick apprehension, and strong passions; he spoke his mind fearlessly, when and where he pleased, and it was not safe for any to attack him in words, for none better understood the retort *keen*." He inherited none of the courtesy or poetry of his father. These ornamental qualities seemed to have passed around him, to re appear in full force in his four sons. His success, which depended on his great ability and strict integrity, was a compliment to the people of his day. His presence was a terror to the young, and the aged now speak of their feelings at his approach with a shrug of the shoulders. He was emphatically a man of few words, and meddlesome talk and inquiries brought out from him sharp answers.

He was the opposite of Dr. Tracy in deportment. The two once met in consultation at the house of Deacon Lyman, in Middlefield, when it devolved on Dr. Tracy to announce the decision, which he began to do with his usual exuberance of smooth words. Dr. Osborn immediately left the room, remarking as he went, "a sick room is no place for compliments." He once called on his friend, the noted Josh. Stowe, at a time when Mrs. Stowe was suffering

from a severe headache. On her applying to the doctor for relief he replied, "comb it." He soon left, when Mrs. Stowe attacked her husband for thinking so much of a man who would give such a rude answer. The judge replied, "You have no right to condemn a prescription without trying it." She immediately followed the advice, and the headache disappeared in the operation. He was once called to prescribe for an enemy of his, who was very sick, whom he assured that professionally he should do all he could to save him, while personally he would not care if he was in hell already. He was summoned to Durham early one morning, when a good lady remarked, "you are not looking very well, doctor." He replied "God Almighty never intended I should, madam; get me some breakfast." He had constitutionally a predisposition to consumption, of which his father and son died about the age of forty, and he himself was subject to hæmoptysis. Yet, by his regular habits, early rising and retiring, regular exercise, temperance in eating and drinking, and his rigid observance of all the laws of health, he was enabled to live longer than their united ages. He continued through life to wear short breeches, with large knee and shoe buckles, his hair powdered, braided in a cue, and tied with a black ribbon. He was a strong churchman—his inventory contained two pews in the Episcopal church, prized at $100, and prayer books at $4.50 each. He built and last occupied the frame-house on Main street, opposite the Episcopal church. He died in 1825, aged nearly 85 years, and a plain brown stone in the Mortimer cemetery marks the last resting place of one who was so long a prominent citizen, and a physician who *spent his whole life in Middletown.*

The records of our society show that Drs. Osborn and Tracy obtained dismission at a time when Dr. Hall was loaded with offices by the society, and when, as Dr. J. P. Kirtland says, "A most virulent medical warfare was waged between Drs. Osborn and Hall, (no blood was shed,) but such dreadful implements and explosive words, equal to modern bombshells, as quack, ignoramus, impostor, etc., etc." "Dr. Potter entertained a favorable opinion of Dr. Hall's attainments and qualifications, but thought some of his attacks on Dr. Osborn were not duly respectful to one of the age and high standing as a physician and citizen which the last named sustained."

Dr. John Osborn had two sons who entered the profession.

Prof. John C. Osborn, who settled in North Carolina, and, after

achieving considerable distinction, removed to New York, was appointed Professor of the Institutes of Medicine and Materia Medica in Columbia College Medical School in 1808, and of Obstetrics in the College of Physicians and Surgeons in 1813, when the schools were united. He was distinguished for character and attainments, and was especially interested in the medical botany of this country. He was the most distinguished of the name, and received many well-deserved honors.

Dr. Samuel Osborn, a younger son, settled in Brooklyn, N. Y., in 1810 removed to the city of New York, was active and honored in the medical affairs of the State and city, and proved his devotion to duty during the fearful scourge of yellow fever. He left two sons, both of whom are in practice in New York.

Dr. Wm. Brenton Hall was the son of Brenton Hall, Esq., a respectable farmer of Meriden, and grandson of Rev. Samuel Hall, of Cheshire. Both places were societies in Wallingford at that time. Dr. Hall was born in 1764, and graduated at Yale College in 1786, and probably studied medicine in New Haven—perhaps while pursuing his college course. It was claimed for him that he enjoyed special advantages from medical lectures, which he had attended somewhere. We are unable to find his name in either of the two colleges of that day. He might have attended the private lectures of Dr. Romayne, of New York, which was the only school there at that time. He commenced practice in Middletown in 1790. He married, in 1796, Mehitable, the sixth daughter of Major-General Samuel Holden Parsons, of revolutionary fame, who was one of the judges at the trial of Major Andre. Dr. Hall had four children, two daughters, who died young, the last son died recently, at Binghamton, N. Y., where he had been a very successful merchant. Dr. Hall made surgery a specialty, and had the most of that branch of practice. In August, '96, he gained notoriety by his heroic professional conduct in attending the cases of yellow fever at Knowles Landing, or Middle Haddam. Dr. Tully, in his letter to Dr. Hosack, and in his work on fevers, gave the following account of that occurrence: "The brig Polly arrived from Cape St. Nicholas Mole; on her homeward passage, one of her crew, by the name of Tupper, died, on board, of the yellow fever; the clothes which he wore while sick were thrown overboard, though a sail, on which he lay when he died, was retained.

"On the arrival of the brig at this landing, Hurd and Ranney

were employed to assist in clearing her out. They were known to handle the sail on which Tupper died. At the same time Sarah Exton and Elizabeth Cook were employed in washing some of the sailors' clothes. A few days after, these persons were attacked with yellow fever. In about five days Hurd died, and within twelve hours Ranney and Sarah Exton. The alarm in the village was already so great that Sarah Exton was left alone in the night, and was found dead in the morning, with her infant child at her breast. The whole village was panic-struck. After the three first deaths, Dr. Bradford, an old physician resident of the place, and Drs. Hollister and Thatcher, two young men, departed precipitately, and did not return till all traces of the disease had disappeared. About two hundred of their employers followed their example. Only five persons had firmness and humanity sufficient to remain to take care of the sick and bury the dead. The physicians who attended the latter cases were Dr. Wm. Brenton Hall, of Middletown, and Dr. John Richmond of a neighboring parish. From this single vessel there originated eleven cases of yellow fever in the town of Chatham, nine of which proved fatal. It is sad to reflect that a majority of those who so nobly risked their lives at this post of danger, and of those who so cowardly fled, should have missed the opportunity to become noble martyrs to professional duty, and should have fallen victims to alcohol. Dr. Eli Ives used to express to us his wonder that so many physicians of that period escaped becoming drunkards; that he had been urged to drink fifty times in a day, and many times at places where he could not procure a mouthful of food for himself or his hungry horse."

Dr. Hall was an active member of the medical society, was treasurer of the State Society from 1799 to the year of his death; was elected Fellow from 1797 to 1809; was five years on the examining committee. He was largely engaged in teaching medicine. Dr. Osborn used to say he turned off doctors as fast as a rake-maker could rakes.

In 1792, the town of Wallingford voted permission to Dr. Hall to open a house for inoculation for small-pox on his father's farm, in the northeast part of Meriden, near the Middletown line, Dr. Hall becoming bound to pay forty shillings or more for each case of small-pox in the town, spreading from the persons inoculated.

Several other physicians in Wallingford, encouraged by the success of Dr. Hall, subsequently obtained permission, and opened houses for inoculation in other parts of the town.

In 1801, a few months after the first vaccination on this continent, Dr. Hall associated with Dr. Ensign Hough, of Meriden, (father of Dr. Isaac) to introduce vaccination. A Mr. Paddock, of Meriden, and Mr. Bradley, of Middletown, were induced to become subjects for experiment, and, in view of the uncertainty of the results, as it was then considered, the physicians agreed to attend the men, each on the alternate days, for three weeks. They were confined at a house near Dr. Hall's pock-house, and each vaccinated three times, when inoculation gave place to vaccination.

Among the students of Dr. Hall were Dr. Isaac Smith, of Portland; Dr. Isaac J. Hough, of Meriden; Dr. Worthington, of Lenox, Mass., all of good standing, both in and out of the profession. They all seemed to entertain a high regard for the talents and medical attainments of their preceptor, as did also Dr. Jared Potter, Dr. Hall's particular friend and counsellor, whose opinion at that time was conclusive. Dr. Hall was noted for hospitality; his house was a great center for the profession in the neighboring towns. His side-board was especially free. On his last attempt to visit a patient he fell from his horse before leaving his yard; he was taken to his bed, which he was not after able to leave, and died in 1809, aged 45. Dr. Hall built and occupied the house next south of the Mutual Assurance building, on the west side of Main street.

Dr. Ebenezer Tracy was born in Norwich Town in 1762, and was cousin to the late Dr. Tracy of the same place. He studied medicine with Dr. Philip Turner, who was Surgeon-General of the Northern States during the Revolutionary war.

Dr. Tracy settled in Middletown in 1785, where he practiced more than sixty years, or as long as Dr. Osborn. He married Maria, daughter of Major-General Artemas Ward, of Shrewsbury, Mass., in 1790, by whom he had ten children; two were sons, both merchants, in New York and Peru.*

Dr. Tracy, through his whole life, visited his patients on horseback, as did the Tracys and Turners of his native place. He was a gentleman of great smoothness of manners, and his practice was in accordance with his character—mild and expectant.

He was elected Fellow in 1794 and '98, after which he seems to have ceased his connection with the society. He was one of the

* Henry D. Tracy was drowned in Peru in 1853, and Samuel F. died in New York in 1863.

examining committee as long as he remained a member. He built and occupied the house next east of the North Church. Died in 1856.

Dr. John Ely, one of the first Fellows elected by this Society, was born in Lyme, 1737. He commenced the practice of medicine in Westbrook, where he married the daughter of Rev. William Worthington, of that place. He soon attained eminence in his profession, was especially successful in treating small-pox, and was interested in introducing inoculation. He entered the army at the very beginning of the Revolutionary war, raising a company of militia, and later, raising, and, to a great extent, equipping, the regiment of which he was colonel. He won distinction as a surgeon as well, and was sent to the army of the North on account of an epidemic of small-pox then raging. He was tall and erect of form, of decided character, and commanding presence.

His military career is succinctly told in the report of the Committee on Revolutionary Claims in the House of Representatives. Jan. 23, 1833. After reciting his earlier services, the report proceeds as follows, viz :

On the 9th of December, 1877, he was captured by the enemy, and became a prisoner of war, and was paroled at Flatbush, on Long Island, where were also prisoners several hundred American officers. Among these officers a distressing sickness prevailed, and Col. Ely, from the humanity that belonged to his character, from the day of his captivity to the day of his exchange, faithfully and exclusively devoted his time and attention to them as a physician. "In discharging this duty, he encountered great hardship and much expense, as the residences of the sick officers were scattered over a considerable space of country, many of them being as much as twenty miles apart. Col. Ely, when unable from bodily infirmity, or the state of the weather, to perform his long tours on foot, hired a horse at an extravagant price, and paid the cost out of his own private means; he was also frequently compelled to purchase medicine for the sick at his own cost." "Soon after he became a prisoner, his son, Captain, afterwards Dr. Worthington Ely, in conjunction with other friends, fitted out at their own expense a vessel, and manned her, for the purpose of surprising and capturing a British force, with which to effect the exchange of Col. Ely.

"The object of the expedition succeeded, so far as regarded the

surprise and capture of the enemy, and the prisoners were delivered to the proper authorities, to be exchanged for Col. Ely. This, however, was not done, by reason of the earnest entreaties of the sick American officers, who considered their lives as greatly depending upon the continued attendance and skill of Col. Ely. He was induced to forego his right to an exchange, and consented to remain for the comfort and safety of his brother officers.

"It appeared from a certificate of Samuel Huntington, President of Congress, that still subsequent to the time when his exchange might have been effected through the valor of his son and friends, and when he became entitled to an exchange by the regular rule, that a deputation of exchanged officers, who had been his fellow-prisoners, were appointed to wait on Congress by the sick officers who remained in captivity, and to urge the continuance of Col. Ely as their physician and surgeon."

"At the head of this deputation, was Col. Matthews (since a member of Congress, and Governor of Georgia), and Col. Ramsay, of the Maryland line. Col. Ely was, in consequence of this representation, not exchanged, although entitled to an exchange. He remained and acted as physician and surgeon till the 25th of December, 1780, when he was released—a period of three years."

On his return, in 1781, with impaired health and constitution, he found his affairs in a ruinous condition, and a burden of debt accumulated. He courageously commenced work, and to some extent retrieved his misfortunes, but his health failing, and just compensation for his services being denied in the Senate, after he had every expectation of favorable action, having received recommendation from the war department and the passage of his claim through the House, he became discouraged at the injustice, made no further efforts, and died soon after, in 1800. Although compensation had been promised by letters from Washington himself, the influence of Oliver Ellsworth, then prominent in the Senate, who was opposed to the payment of all claims in the interest of the treasury, secured the rejection of this. Years later, his sons received a grant of five thousand dollars, many original papers having been lost.

Dr. Ely won the love, respect, and admiration of all with whom he became intimately associated, and was idolized by the soldiers. He excelled as a conversationalist, and in the practice of his profession was characterised by zeal and humanity. The amiable traits of his character, his generosity, and self-sacrificing devotion

to his country and humanity—sadly enough—were the cause of shortening his life, and embittering his last days. He left two sons and three sons in-law in the profession. Dr. Worthington Ely, the elder son, who attempted a rescue of his father, settled in New Baltimore, N. Y. Dr. John Ely, Jr., settled in Coxsackie, N. Y., was a Member of Congress, and one of the incorporators of the College of Physicians and Surgeons, N. Y.

Dr. Richard Ely was born in North Bristol, Guilford, now North Madison, in 1765, where his father of the same name was the settled minister. He graduated at Yale in 1785, studied medicine with Dr. John Noyes of Lyme, who certified as follows :—

"To all people to whom these lines shall come—Greeting.

Whereas, Dr. Richard Ely, of Saybrook, hath been liberally educated, and been a student with me in the theory and practice of medicines and surgery, and, whereas, said Ely hath made great improvement in the art of physics and surgery, he is well qualified for a practitioner in said arts. I do, therefore, recommend him as a safe, judicious, and able physician, and well qualified for the practice.

Lyme, June 9th, 1786. John Noyes."

Dr. Ely commenced practice in what is now Killingworth, where he remained four years, when he removed to Wilbraham, Mass., where he had previously married Eunice Bliss in 1791. He remained there about a year, when he returned to Pautapaug, now Centerbrook, where his father was then settled. He remained there till 1805, when he removed to Chester. His father, who had become a widower, and infirm, went with him and shared his home till his death in 1814, the same year Dr. Ely received the honorary degree of M. D., from Yale College. Dr. Ely died in 1816 from a fever brought on by overwork and exposure. He had been treasurer of the State Medical Society three years, at the time of his death, he had been elected a Fellow sixteen times in twenty-four years, and was an active member of the society. He shared the confidence and respect of the profession, and the public in a large degree. He was the friend and teacher of the late Dr. Webb of Madison.

Dr. Ely had a large consultation business in the adjoining towns: his rides were very extensive, and he did a large business east of the Connecticut river. Dr. Samuel Carter said of him, "he never

knew a physician who could get at a correct diagnosis as soon as Dr. Ely." One of his cases in East Haddam was a Miss Green, only daughter of a prominent citizen. She had spotted fever twice, tetanus set in, and all articles had to be given through a vacancy from an extracted tooth; she recovered all but a scar as large as a silver dollar on her cheek. His death was considered a great loss to the public and the profession.

William Ely, (Yale, 1785,) brother of Richard, studied medicine under Dr. John Noyes, but did not follow the profession.

Dr. Elisha Ely was born in Lyme, in 1748, and like the former Elys, was a descendant of the original Richard Ely, who came from Plymouth, England, and settled in Lyme. He was half brother to Dr. John Ely, with whom he is supposed to have studied his profession. He married Susannah Bloomer, by whom he had nine children. He practiced at Old Saybrook; was largely engaged in small-pox inoculation. His reception house was on the present Fenwick grounds. He purchased a large tract of land in Pennsylvania, on which Wellsboro, the shire-town of Tioga county, is now located. In 1797, he removed his family to Owego, N. Y., to remain till his new town was ready. He soon after lost all his property by the failure of the "Penn title," on which his own depended. The surrounding country was then a wilderness, without roads or bridges. He died in 1800 from toil, exposure, and misfortune.

William A., one of his six sons, was a leading man and a successful merchant in Owego, where he left two sons, now in the drug business.

Dr. Ely was much respected as a man and a physician. He was a leading Mason, and buried by the fraternity.

Dr. Benjamin Hill was the youngest, except one, of a family of twelve children. His parents were James Hill, of Guilford, who removed to Killingworth, where he married Hannah Nettleton. Benjamin and his brother Joseph, twins, were born April 15th, 1765. Dr. Hill it is supposed studied medicine with Dr. Gale: he married about 1795, Jemima Stannard, of Westbrook, by whom he had six children. In early life he purchased a considerable tract of wild land in the State of New York, where LeRoy is now located, and as each of his five sons grew up to manhood, they went out to occupy and improve the land.

After practicing medicine in North Killingworth with accept-

ance and great success for about forty years, he met with financial embarrassments in his native town, from becoming security for men who were either unfortunate or dishonest; and about 1832, he having lost his hard earnings among the rocks and hills of Killingworth, removed to his purchase in LeRoy, where he died in 1849, at the age of 74. His residence in Killingworth was a mile north of the center.

Dr. Samuel Redfield, son of Dr. John Redfield, of Guilford, and Amanda Russell, of North Guilford, was born in Guilford, Sept. 12, 1762; served as a fifer during the Revolutionary War, after which he studied medicine with his father, and with Dr. Benjamin Gale of Killingworth, and commenced practice as a physician in Guilford, where the eldest of his two children was born. He married, May 21, 1782, Nancy, daughter of Asher Fairfield and Thankful Hubbard, of Guilford. After practicing for about twelve years in Clinton, then Killingworth, he removed first to Fairfield, Herkimer county, N. Y., and subsequently to Perrysburgh, Cataraugus county, N. Y., where he died in 1837, aged 75 years.

Dr. Hezekiah Brainerd, the oldest son of Hezekiah and Mary (Fiske) Brainerd, was graduated at Yale College in 1763, and studied medicine in part, if not wholly, with Dr. Benjamin Gale, of Killingworth, now Clinton, and commenced practice in his native place, where he was the principal physician for many years, and where, particularly as an inoculator for the small pox, he was eminent, many resorting to him from Haddam and towns around for inoculation, as a protection against that disease, so dreadful when taken in the natural way. In 1787 he built a pock house (as it was called), under the direction of the town, which voted him the exclusive right to the business of inoculation and treatment, for the term of four years, paying him "ten shillings a head" for each resident inoculated, and receiving from him "eighteen pence a head," for each non-resident. The thinness of the milk which constituted the bill of fare at the house is still proverbial. Upon the formation of Middlesex County, 1785, he was one of the number selected as a judge of the Court of Common Pleas, and discharged the duties of that office until afflicted with paralysis in 1795, when he died, aged 63.

Dr. Smith Clark was born at Maromas, Middletown, graduated at Yale in 1786, where he was a class-mate of Dr. Hall. He resided

in Haddam for more than twenty years in the family of Dr. Brainnard, whom he succeeded in practice. He died in 1813.

He was the first clerk of this Society, and continued in office for ten years, and was one of the examining board for this county for about the same length of time. He was elected a Fellow for six years. Prof. John D. Higgins, formerly of Geneva College, studied with him in 1810.

Dr. Clark was a kind and faithful physician, beloved by the public, and respected by the profession. His otherwise pure record was stained by an act which resulted in the birth of an illegitimate son, to whom he honorably gave his name and his property.

His friend Dr. Richard Ely was appointed guardian, and the son was educated at Yale, 1817, and became an able lawyer in his native town of Haddam, where he died, in 1876, aged 81 years.

Dr. Thomas Moseley, son of Abner Moseley, of Glastonbury, was born 1731, graduated at Yale College 1751, and settled in East Haddam. He married for his first wife Phebe, daughter of Jonathan Ogden, Governor of New Jersey, in 1759. He afterwards married the widow of Gov. Thrcop, who was a daughter of Gov. Matthew Griswold. He left but one child, by his first wife, Jonathan Ogden Moseley, who followed the profession of law, and was a member of Congress from this district for about twenty years. Dr. Moseley was one of the first fellows elected by this society, and re-elected every year till his death. He was the fourth president and vice-president of the State Society, and the first elected to either office from this county. He received the honorary degree of M. D. from the Connecticut Medical Society in 1795. He died in 1811, aged 80 years, leaving his medical library to his friend, Dr. Richard Ely.

Dr. Jeremiah Bradford practiced in Middle Haddam from 1754 to 1814, dying at the age of 80. Dr. D. B. Hollister, of Haddam, Dr. Elisha Phelps, of Portland, who removed to New Hampshire in 1805, where he died in 1819, Dr. Christopher Holmes, born in Hadlyme, 1762, where he practiced until his death in 1812, Drs. John Richmond, of East Hampton, and Jehiel Hoadley, (Yale, 1768,) of Middlefield, who were largely engaged in teaching medicine, were among the earlier members of this society. Dr. Robert Usher was a native of Millington, in East Haddam, and a student of Doctor Huntington, of Windham, located in practice in the southeast part of Chatham, on the east side of Salmon

River, near the Lyman Viaduct. Upon the breaking out of the Revolution, he went as a volunteer to the vicinity of Boston, and in January, 1776, was appointed surgeon for Wadsworth's regiment, in the recruits then raised for Cambridge, and served some time in that capacity. Dr. Elias Norton, son of Rev. John Norton, who served his time with Dr. Thomas Moseley, of East Haddam, was appointed mate of Dr. Usher. Dr. Usher returned from the war to his old home where he died in 1820, aged 77.

Dr. Norton settled in Machias, Maine, where he practiced many years.

Dr. Elisha Mather was son and student of Dr. Eleazer Mather, of Lyme, (Yale, 1738), and brother of Dr. Samuel, his father's successor in business, and of Dr. Augustus who practiced in East Haddam. He married Elizabeth Selden, of Lyme, and located at Pautapaug, now Center Brook, where he spent his whole professional life, and died in 1836, aged 81. He had seven children, four were sons, and all studied medicine.

The first Samuel R. S., studied with his father and afterwards became a sea-captain, and was lost at Turk's Island, in the great September gale of 1815.

The second child, Elizabeth, was mother of ex-Senator Lyman Trumbull of Illinois. The third, Elisha, studied with his father, and removed to Sodus, New York, where he died recently. The fourth, Ezra S., studied with his uncle Samuel, and located at Essex, where he still lives, aged 89 years. His seventh child, Ulysses W., graduated at Yale Medical Institution, in 1823, with great promise. He succeeded to his father's practice, died in 1832, with consumption, aged 30 years.

Dr. Mather was engaged largely in teaching medicine, and his students for many years added life to the village in which he lived. It is said an unpleasantness always existed between the rich young men of the town, and the medical students; the former gave the latter the cut at every opportunity. At one time, they got the students excluded from the favorite seats in the church. The sabbath following, the young nobility dressed in their thin summer pants, marched in a body to the preferred seats, which they did not enjoy long, before they felt an irritation in the rear; before prayer was concluded, there was a stampede for the door. Dr. Mather was called, and found cow-itch had been dusted on the seats.

Dr. Cone, of Westbrook, was a student of Dr. Mather. Prof. Joseph Mather Smith, of New York, is said to have been a cousin and student of Dr. Samuel Mather.

Dr. Amos Skeels, a native of Woodbury, was a soldier in the revolutionary war; and in the battle of White's Plains was wounded in the right arm while pursuing the English in their retreat from Danbury; being in consequence unfitted for labor he turned his attention to the study of medicine. For a time he studied in Litchfield, but the most of the time at Bethlem with Dr. Hastings. While there he became a devoted Christian, which shaped his conduct through life. He commenced practice in Hampton, Conn., in 1783, removed to Middle Haddam, near the line of East Hampton, in 1787, and again to Somers in 1795, and afterwards to Chicopee, Mass., where he became a deacon in the church.

He died in 1743, aged 93.

OBITUARIES.

WILLIAM HENRY COGSWELL, M. D., PLAINFIELD.

By Wm. A. Lewis, M. D., Plainfield.

Dr. William H. Cogswell was born Dec. 3, 1798, in Griswold, Conn., and died at Plainfield, Nov. 22, 1876, aged 78 years.

He was the eldest of a family of six children, and with them improved such limited advantages as were afforded in those earlier days of our history. From the farm he entered upon the study of medicine, receiving his degree from Yale Medical college in 1823. He immediately began practice in Plainfield, entering into partnership with Dr. Josiah Fuller; but after two or three years established himself in a separate office, and ever afterward conducted his business independently of any one.

As a physician, Dr. Cogswell has a reputation that will bear the test of years. Thirty years ago there was not a more prominent member of the medical profession within the limits of Windham county than he. His practice extended over the four towns forming the southeast portion of the county, and occasionally his services were required beyond these limits. A thorough student of his books, a practical man in his business; by his social qualifications, as well as by his professional skill, he held his own and more, in his chosen field. He was for many years a member of the Windham County Medical society, and from time to time was the presiding officer of that organization. In 1853 he was elected vice-president of the Connecticut Medical society, and the following year was chosen president of that body, a position he held for two years in succession. Here, as elsewhere, he made his presence felt, and the interests of the society were not allowed to lose caste through lack of effort on his part.

During the war of the Rebellion, Dr. Cogswell was appointed by Governor Buckingham a special agent to visit the sick and wounded Connecticut volunteers in the United States military hos-

pitals. His commission was dated August 13, 1863. In this capacity he gained an enviable notoriety for thorough performance of his duties, and it was only when the war closed, two years later, that he returned to the practice of his profession in Plainfield. From that time until his death he remained within the quiet of his own home, making his daily round of visits regularly, though from the indisposition incident to old age his business had considerably diminished. On the Saturday before his death occurred, he visited his patients as usual. On Monday he was ill, and on Tuesday a physician was called, but medical aid was of no avail; the sands of life ran wearily out, until just before dawn Wednesday morning he breathed his last. His disease was hypertrophy of the heart.

About thirty-five years ago no man in Eastern Connecticut was better known in politics than Dr. Cogswell. In 1830 he represented the town of Plainfield in the lower house of the State Legislature. In the Clay canvass he took an active part, and shortly after he was pressed by his friends to become the Whig candidate for Congress from the Third District. In 1860 he represented the Thirteenth Senatorial District in the State Senate, this being his last official position. After the dissolution of the Whig party, Dr. Cogswell became a Republican, remaining with that party until his death. He was married about the time he entered upon the practice of his profession, to Miss Mary L. Fuller, daughter of Dr. Fuller, his partner. Her death occurred a few years later, and in 1829 he was again married to Miss Lucretia A. Payne, of Canterbury. His wife still survives him, as do also five children. His death, coming so suddenly, was a sad blow to them, as well as to the community in which he has lived so long and well.

It would be useless to attempt any eulogy of the character of Dr. Cogswell. To do this it would be necessary to draw aside the veil that hangs between his private social life and his public career. I might dwell upon his kindliness, his sense of honor, his probity, his temperance, his prudence, his love of home, of wife and children, his patriotism, his professional skill, and his character as a Christian. Those who knew him best loved him best. A professional acquaintance, lasting through a period of twenty-five years, has shown to the writer many excellent traits in the character of Dr. Cogswell. Towards his professional brethren he was always social, frank, and generous, and incapable of an unprofessional act. To his patients he was kind, faithful, and self-sacrificing

to an extreme degree. As a citizen he was excelled by none in public spirit and patriotism. But far better than all else was his character as an earnest Christian, ever seeking a higher and a better life.

The old man of nearly four-score has found rest at last; why not? There was not power enough in the universe to have run the machinery of life longer than its appointed time. He who for more than half a century has so fearlessly and successfully crossed swords with Death, has fallen. But it was only when a life's work was finished that the battle ended, and the brave old ship, baptized in many a storm, sought and made its port at last. "Peace to his ashes," and so we rest content, feeling that

> "He gave his honors to the world again,
> His blessed part to heaven, and slept in peace."

JOEL CANFIELD, M. D., GUILFORD.

By Alvan Talcott, M. D., Guilford.

Dr. Joel Canfield was a native of that part of the old town of Saybrook, Conn., which is now named Chester. He was the third of the nine children of his parents, Mr. Joel Canfield, of Saybrook, and Sarah Peters, of Preston, and was born March 10, 1801. His early education was conducted in the common schools of his native town. He prosecuted his medical studies partly in the office of Dr. John S. Peters, of Hebron, and partly with Dr. Samuel B. Woodward, of Wethersfield. He attended a course of medical lectures in the Yale College Medical Institution in 1823–4, having the benefit of the invaluable theoretical and practical teachings of Dr. Nathan Smith, Dr. Eli Ives, and Dr. Jonathan Knight. He received a license to practice as a physican and surgeon in March, 1824, and on the 1st day of June following he commenced practice in Guilford, Conn., locating himself, the first year, in the parish of North Guilford. One year afterwards, he removed to the village of Old Guilford, on the same day with the decease of Dr. Joel L. Griffing, of Guilford, a physician of much promise, who died of phthisis at the age of 36. Dr. Canfield succeeded to his business, and had at once a large and lucrative prac-

tice. Other practitioners, however, came in after a few years, and divided the business with him.

On January 10, 1827, he married Lucretia M. Bartlett, daughter of Daniel Bartlett and Lucretia Benton, of North Guilford, born Feb. 22, 1802, a lady of great excellence, and, in the best sense, a helpmeet for him. Although not blessed with children, the connection was eminently a happy one. Dr. Canfield and his wife joined the Congregational church of Guilford, by profession, in 1834. Mrs. Canfield died in 1876, in the fiftieth year of their married life. Dr. Canfield was very deeply affected by her loss, and he appeared never to have recovered from the shock.

As a practitioner of medicine, Dr. Canfield, in the earlier years of his practice, was bold and free in the use of mercurials, but in later years, he abandoned their use almost entirely. In recent years, he should be classed in the expectant school, with the exception of one point. He has always been much in favor of the use of the lancet, and there have been very few diseases of a grave character in which this potent remedy did not seem to him to be indicated. He was always very attentive to his patients, and did not dismiss them till their convalescence was fully established. He retained, through a long life, the respect, confidence, and affection of many worthy families.

The honorary degree of Doctor in Medicine was, at the request of the Connecticut Medical Society, conferred upon Dr. Canfield by Yale College in 1847. He has also been very frequently elected as a Fellow of that Society.

As a man, Dr. Canfield was very decided and positive in his convictions, and very persistent in carrying out his plans. He took, years ago, an active and prominent part in the Anti-slavery movement, and also in the Temperance cause. Any opposition that he might meet only made him more ardent and decided, and it was not easy to turn him from his purpose.

Some forty years ago he had apprehension of organic disease of his heart. He sought the best advice in the case, relinquished business for a time, and traveled in the West. After a few weeks he returned, with health restored, and resumed his business; and since that time he has hardly been detained from his work a single day by sickness of any kind.

On the morning of April 9, 1877, being in usual health, he took the cars for Saybrook, and from thence for Chester, hired some boys to row him across the Connecticut river, and was on

his way to visit a brother and a niece in Hadlyme. After walking a few rods in a lonely road, and when out of sight of any human being, he was stricken down by failure of the action of the heart, and died almost immediately. Some five hours afterwards his body was found, his left hand still grasping a stone in the wall for support. His funeral was attended on the 11th, in the Third Church of Guilford, by a full assemblage of his relatives and friends, with very appropriate remarks from his pastor, Rev. George W. Banks. His age was 76 years and 30 days.

SAMUEL SHERWOOD NOYES, M. D., NEW CANAAN.

Dr. Noyes was born at Weston, Conn., May 20, 1787, and was consequently nearly ninety years old. His parents were the Rev. John Noyes, and Eunice Sherwood Noyes, daughter of the Rev. Samuel Sherwood, of Westport. His ancestors through several generations were clergymen, and many of his near relatives were eminent in learning and in usefulness. He was the oldest of nine children, one of whom Mrs. Hawley, of Auburn, N. Y., aged 88, is still living. Dr. Noyes early inclined to the study of medicine, and with this purpose entered the office of Dr. Samuel Darling, of New Haven. He afterwards studied with Dr. David Richmond, of Westport, of whom he often spoke with affection and respect as his preceptor. He commenced the practice of his profession in New Canaan, in 1811. The following year he married Esther Chapman, of Westport, with whom he lived nearly sixty-two and a half years. Their family numbered nine children, four of whom survive him. Mrs. Noyes died April 4, 1875.

Dr. Noyes was the first physician located in New Canaan who relied upon the practice of medicine alone as a means of obtaining a livelihood. His associates in the profession were Dr. Joseph Silliman, Dr. Richmond, Dr. Percival, of Darien, Drs. Butler, Bissell, and Miller, of Norwalk, Drs. Knight, Hooker, Ives, etc., of New Haven.

Many will remember the fearful epidemic which prevailed here about fifty years ago, at which time Dr. Noyes distinguished him-

self as a physician of rare skill and success in the treatment of what was then styled "putrid sore throat." The progenitors of Dr. Noyes were long-lived, and he inherited a constitution of unusual vigor. Yet it is but justice to the living to record that without doubt his days were lengthened, and we know they were made comfortable and happy, by the self-sacrificing devotion of his affectionate children. He retained his faculties to a remarkable extent, and until within a short time read medical literature with avidity and pleasure. He was an ardent lover of his professiou, and the zeal and enthusiasm born of this love infused all his practice. His chosen calling was the absorbing object of his life. It was not simply the means of support, but it was a sacred calling, enlisting all his sympathies and consecrating all his energies. As a legitimate result of his professional enthusiasm and devotion, he was eminently a successful practitioner, and enjoyed public confidence to an unusual degree. Possessing unflinching perseverance and indomitable energy, he shirked no duty and evaded no responsibility which his vocation imposed. He seemed to find his recreation in the labor and care of the duties of his profession.

One of his conspicuous traits was his unwearied devotion to his patients. No considerations of personal ease or comfort ever prompted him to neglect them. Another characteristic was his honesty and conscientiousness in expressing his professional opinions, and in all his intercourse with his patients or their friends. By his large and varied experience, and by his courteous and gentlemanly bearing towards the members of his profession, he won quite a reputation as consulting physician, and this branch of his practice extended over a large territory. He was deeply interested in the County Medical Society, of which he was for some time president, and was several times a delegate to other states. Not only by his professional skill was his reputation secured, but by his rare qualities of mind and heart. His intercourse among his friends was cordial, and his hospitality was ample. His abiding faith in the truths of the Christain religion controlled and molded his whole private as well as professional life. His purity of purpose was unquestioned, and his firmness in the performance of duty was most commendable. He was an exemplary member of the Congregational church, which he joined in 1827, and, whenever consistent with his duties, was found in his place in the house of God. His long and arduous practice was well rewarded, not perhaps in the base currency of earth, but by the consciousness of

duty well performed, and by the gratitude of his numerous patrons and friends.

But he is gone. His venerable face and form we shall see no more. He has gone to the grave like a shock of corn fully ripe. He has set up his staff at Heaven's gate and entered into the life everlasting.

> "Of no disaster, no disease he died,—
> But hung like autumn fruit that mellowed long,
> Even wondered at because it falls no sooner.
> Fate seemed to wind him up for four-score years
> Yet freshly ran he on ten winters more;
> 'Till, like a clock, worn out with eating time,
> The wheels of weary life at last stood still.'"

B. B. NORTH, M. D., NEW CANAAN.

By James Howard North, M. D., Goshen.

Dr. Burritt Beach North, was born in Cornwall, Conn., November 24, 1804, and was the son of Dr. Joseph North, who for many years was a practicing physician and surgeon in Cornwall, and surrounding country. Dr. North, quite early in manhood, decided to follow the profession of his father, and immediately devoted his mind and the whole force of his earnest nature to the study of medicine. He studied with his father, also with Dr. Delamater, and graduated February 29, 1829, from the Medical and Surgical College of Fairfield, New York.

He returned to his native place and begun the practice of medicine, where he continued with deserved success, until his death, which occurred July 12, 1876, with the exception of two years during which he practiced in New Britain, Conn.

His life was one of the highest honor, purest morality, and unflinching integrity, though he never committed himself to any of the prevailing religious beliefs.

His greatest pleasure was in the study and practice of his profession, the dignity of which he ever maintained, not only by a careful investigation of diseases, but by a strict adherence to its ethics, and devotion to all things that tend to an elevation worthy of its importance among the sciences.

With feelings of admiration, love, and gratitude, the writer of this sketch recalls the many happy and profitable hours passed in his society, as no doubt do many others who have sustained to him the relation of student to preceptor, and how eagerly he led us on in the mysteries of the healing art, inspiring us with somewhat of his own enthusiasm, teaching us to watch well the operations of Nature, and to shape our work as nearly in harmony with her as possible, making the search after knowledge a pleasure rather than a task.

An instance in his early student life will somewhat illustrate his inquiring faculty and the acuteness of the perceptive powers, so characteristic of him throughout his medical career. A patient who resided in Torrington, where the young doctor was at that time in business, had been suffering for some time with some obscure disease, with hectic, and profuse perspirations, and was considered by his medical attendants to be in the late stages of consumption. The young student having observed the case somewhat closely and studied it carefully, told the patient and his medical attendant that instead of the disease being consumption, he believed the patient to be laboring under psoas abscess, and that if the pus were evacuated he might recover. The patient was referred to an eminent physician of the day, who found the young doctor's diagnosis correct, and subsequent treatment proved effective and quite successful.

Out of a family of four sons and one daughter, there are but a son and daughter surviving, the doctor having lost his wife and youngest son within one week, in March 1875, and it was through his unceasing care of them throughout their last sickness, added to his then hard ride, that his naturally iron constitution and firm organism at last quite rapidly yielded, though he had passed the allotted age of man, and was laboring under a urinary disease of long standing, as before stated. He quietly ended a long, laborious, and useful life on the 12th day of July, 1876, in his seventy-second year.

In March 1866, Dr. North met with a sad loss, as also did the profession, in the death of his son, Dr. William B. North, who graduated from Yale Medical College, went into the service as assistant surgeon of the 18th Conn. Vols., lost his health which was very robust, and died at home March 18, 1866. This was a sore trial to Dr. North, as he was anticipating for his son a

career of usefulness, and that he would continue in the family name the profession he so dearly loved.

But I must needs stop here, though memories of the deceased flock in upon me which it would give me pleasure to detail. Suffice it to say, however, that Dr. North was a true man, an honorable gentleman, an earnest and successful teacher and practitioner, and a firm friend and profitable companion.

SIDNEY HASKELL LYMAN, M. D., NEW PRESTON.

By E. P. Lyman, M. D., New Preston.

Sidney Haskell Lyman, M. D., was born in Glastonbury, Conn., Nov. 13, 1813. He was the eldest son of Dr. Norman Lyman of Warren, Conn. His early opportunities for acquiring an education were restricted to the common schools and the academy of the town in which he resided, together with, subsequently, one year spent in studying the higher English branches and Greek and Latin in the school of Benjamin Allen, LL.D., of Hyde Park, in the State of New York.

He studied medicine with his father, Dr. Norman Lyman, and was also for a considerable time in the office of Prof. Charles Hooker, of New Haven. After attending two full courses of lectures at the Yale Medical School, he graduated in 1839, and commenced the practice of his profession in New Fairfield, removing to New Preston in 1841, where he remained in the uninterrupted practice of his profession until a few months before his death—a period of nearly thirty-seven years. He was twice married, first to Miss Almira Eaton, of Kent, and last to Miss Abigail Beardsley, of the same place, who survives him. By his first marriage he had one son and two daughters, of whom one daughter only survives; by his last, of two sons and two daughters, three survive him.

He was not a man to seek notoriety in practice, but being naturally very unassuming in manner, the first impression made, upon either those who might require his professional services or those who might meet him in consultation, would be, not unlikely, less favorable than a more extended acquaintance would be sure to produce.

During the year 1862, in the early part of the war of the Rebellion, he was appointed by the Surgeon-General one of the surgeons to grant certificates of exemption from draft for the county of Litchfield. He was also a member of the House of Representatives in the year 1861. He united with the church when about twenty years of age, and lived a quiet, unostentatious life; a busy, useful career, filled with privations and exposures, the emoluments yielding only a moderate competence. He lived up to the precept, "owe no man anything."

He died February 16, 1877, of softening of the brain, after a long and distressing sickness, at the age of 63 years.

CHARLES HOSFORD, M. D., THOMPSON.

By John Witter, M. D., Putnam.

Dr. Charles Hosford was born in North Thetford, Vt., in January, 1837, and died in Thompson, Conn., March 18, 1877. His mother died when he was a child; his father is still living. He commenced his preparatory studies at 14 years of age, and entered Dartmouth College at 18, entering the class No. 82, and graduating No. 3.

While in college the doctor thought of preparing for the ministry, but afterward gave that up for the study of medicine. After graduating at college, he studied medicine with Dr. Dan, of Harvard, and then attended lectures in New York, graduating at Univ. Medical College, 1863. In March, 1863, he came to Thompson, Conn., and entered into partnership with Dr. John McGregor, with whom he remained until Dr. McGregor removed to Providence, R. I.

In September, 1865, he married Miss Helen Gay, daughter of Mr. Joseph Gay, of Thompson. Dr. Hosford was a consistent member of the Congregational church of Thompson during his residence in the town, and superintendent of the Sunday-school for the last nine years.

During the winter of 1876 and '77, Dr. Hosford had been deeply interested in the subject of religion. Somewhere about the 20th of January, 1877, he began to think it his duty to talk with his

acquaintances about their religious welfare, sometimes remaining until midnight. About 2 o'clock on the morning of the 26th or 27th of January, 1877, I was called to see Dr. Hosford, and found him insane. His insanity was of such a nature as to cause his family to think it the result of religious excitement. He would become violent occasionally, then apologize for his violence; at times had peculiar convulsive conditions, in which he seemed to struggle with a foe, at which time the cutaneous surface became intensely congested; to this succeeded apoplectic sleep for a few minutes, followed by excitement or convulsions. Bleeding was resorted to, controlling the convulsions, but not clearing the mind; the pulse before too rapid for counting, became 120. The bleeding was followed by a large abscess in the bend of the left arm. February 4th the convulsions returning, chloroform was used by advice of Dr. Holbrook, and controlled the convulsions. It was used freely, alternating with Squibb ether, until February 7th, when the convulsions ceased, and his mind became clearer.

From the 4th to the 7th of February, the doctor took between three and four pounds of chloroform, and nearly one pound of ether.

Sometime on the 8th of February he had a slight chill, followed by severe pain in the left side. In the evening of the 8th, slight crepitations could be heard in the lower edge of the left lung. This continued and increased until the whole of the left lung became solid, and nothing but tubular breathing could be heard. At this time, and on to death, he was rational, but very irritable, not being able to endure the least contradiction or opposition. During all this time he complained of his feeling strange and bad, but no pain; would not speak of it unless questioned. This continued until the 24th, when Dr. Gage, of Worcester, was called to see him. Dr. Gage thought the trouble in the lung might have been caused by obstructed circulation through the lung, but made no suggestion in regard to treatment; thought the doctor would not live long.

On the 27th of February, Dr. S. Bowditch, of Boston, saw Dr. Hosford, and after a close examination, confirmed the diagnosis above given, but would not say that the matter in the lung was solid or liquid, but felt it his duty to pass a trocar into the thorax, which he did twice, without result. From the 28th of February there was no noticeable change until the morning of his death, when chills and sinking spells came on, and he soon passed away, March 18, 1877.

March 19th, Drs. Hough, Williams, Holbrook, Kent, Lathrop, and Witter made a post-mortem examination. On opening the head, found the membrane distended with serum; also the ventricles full. The dura mater was adherent in quite a number of points, and perhaps the membrane itself was thickened more or less. The pia mater was intensely congested throughout its whole extent, and very firmly adherent to the convolutions. There were also points of pus deposited on various parts of the membranes. The left lung was one immense abscess, containing two or three quarts of pus. All other organs were in a healthy state.

What should cause the disease in the brain in Dr. Hosford is more than could be told. He always seemed in a state of anxiety when he had anything of importance on his mind; the responsibility seemed to weigh him down. His feelings and views seemed intense, and he entered into everything with his whole soul. In his practice he was apt to look for specific effects from the remedies used, and his failure to find them sometimes led him to distrust himself and the utility of remedial measures. It may be that the frequency of this kind of mental excitement was the primary cause of the trouble in the brain.

Dr. Hosford was an honest, conscientious man, a good citizen, a kind, considerate physician, and a consistent Christian, whose place in the community will not be easily filled.

GEORGE E. PERKINS, M. D., WATERBURY.

By G. L. Platt, M. D., Waterbury.

George E. Perkins, M. D., was born in New Haven, Conn., in 1824. He pursued his medical studies under the direction of the late Prof. Charles Hooker, M. D., at New Haven, and graduated at Yale Medical College in 1843. He practiced medicine two years in Madison, Conn. He went to Waterbury, Conn., in 1848, and entered upon the duties of his profession, of which he seemed fond, and found many friends to appreciate his services. He was twice married. He had no children. He died suddenly August 22, 1876.

DANIEL POLL, M. D., HARTFORD.

By Nathan Mayer, M. D., Hartford.

Dr. Daniel Poll was born in Dresden, Saxony, in the year 1831, and studied at the University of Leipzig. In the revolutionary movements of the year 1848, in Germany, he was implicated, and was forced to fly in consequence thereof, when the monarchical reaction began. He came to the United States, and began the practice of medicine in New York city. There he made the acquaintance of the lady who soon became his wife. Shortly after his marriage he removed to Williamsburgh, and, a few years later, to Meriden, Conn. He settled in Hartford about thirteen years ago, and soon established himself as a favorite physician among the German population. In 1868 he received the appointment of "physician for the poor" from the town of Hartford, and performed the functions of this office for three successive years, to the satisfaction of the selectmen. In the year 1870 he graduated as a Doctor of Medicine at Yale College. He was generally reported very attentive to his families, good natured to the poor, and was liked, for his social acquirements and conversational skill, by many of his acquaintances. In 1876 the doctor lost his wife. Pecuniary embarrassments, which had troubled him for some years, grew more vexatious. His home ceased to be inviting or pleasant to him, and nervous disturbances of a painful neuralgic character embittered his days, and robbed him of sleep at night. He died April 3, 1877, of kidney disease, leaving two children.

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Medical Institution of Yale College,

1877-8.

THE SIXTY-FIFTH ANNUAL COURSE OF LECTURES.

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The course of study in this Institution is divided into two Terms, in each year—a Winter Term and a Spring Term.

The next winter term, being the *Sixty-fifth Annual Course of Lectures*, will commence on the 4th day of October, 1877, and close 31st day of January, 1878. The Spring Term will commence March 15, 1878, and continue until Commencement, June 27, 1878.

In the Winter Term, instruction is given by means of Public Lectures, with daily examinations, illustrated by Hospital cases, Medical and Surgical Clinics, and ample illustrative apparatus.

In the Spring Term, instruction is given by recitations and lectures. In this Term the students are classified, so that those who are just entering upon the study are taught, during their *first* year, only the more elementary branches; while the studies of the *second* year include the more practical branches. The arrangement during the Spring Term is such that advanced students can continue the studies of both years, as their attainments or necessities may indicate. Two or more recitations will be held daily for each class.

An experience of several years has convinced the Faculty that no mode of medical teaching yet practiced is so successful as a judicious combination of public lectures, alternated with text-book recitations. The superior attainments of students trained under this system, over others, is always clearly conspicuous at the final examinations.

Numerous Clinics, Medical and Surgical, are held weekly, throughout the year, at the College and Hospital.

An Examination is held, and Degrees are conferred, at the close of each Term.

The College Building is commodious, provided with every convenience, and of easy access to the State Hospital.

The Dissecting Rooms, spacious and well appointed, are open during the six colder months, and are amply supplied with anatomical materials at a reasonable charge, under the personal direction of the Demonstrator.

The Museum contains a large collection of natural and morbid specimens, numerous casts, plates, and models of elegant execution, and an extensive Cabinet of Materia Medica, all of which are made practically useful in illustrating the subjects taught. The Libraries of the University, and the Cabinets of Mineralogy and Natural History, are also open for the use of students.

Requirements for Graduation.—Every candidate for a Degree is required to possess, in addition to a good English education, a competent knowledge of the Latin language, and of the principles of Natural Philosophy; to present to the Dean, two weeks before examination, a *Thesis*, written by himself, upon some medical subject; to present a satisfactory certificate that he is twenty-one years of age, and possesses a good moral character. He must have attended two full courses of public lectures, at least one of which must have been in this Institution. He must present a satisfactory certificate from a respectable and regular practitioner of medicine, that he has attended to the study of physic and surgery for three years, including the time spent in attendance upon medical lectures. In case he is a graduate of college, his diploma is received as equivalent to a certificate of medical study for one year.

TUITION FEES.

Always required in advance.

Matriculation Fee,	$ 5.00
Winter Term, Lecture Fees,	105.00
For the Spring Term,	60.00
Contingent Expenses of Laboratory, Spring Term,	10.00
Demonstrator's Ticket, paid once a year by those who dissect,	5.00
Graduation Fee,	25.00

In the Winter Term, students may take the whole or any part of the Lectures, at their option; in the latter case, the fees are $15 for each ticket.

Those who have attended two full courses of Lectures in this Institution are entitled to admission to the Lectures of any future Winter Term gratis. Those who have attended one full course of Lectures in this Institution, and a full course in a similar Medical College, are admitted to a full course of Lectures on the payment of Five Dollars for incidental expenses. Those who have attended two full courses in any other accredited College, may receive all the tickets for the Winter Term, including Matriculation, for $50.00. For further information, address

C. A. LINDSLEY, M.D., *Dean*,
132 Olive Street, New Haven, Conn.

REPORT OF COMMITTEE OF EXAMINATION.

The Committee of Examination met at the Medical College, June 27, 1876.

There were present on the part of the State Medical Society, A. W. Barrows, M. D., President; George B. Farnham, M. D., G. L. Platt, M. D., Irving W. Lyon, M. D., George C. Jarvis, M. D., H. E. Gates, M. D., S. W. Turner, M. D.; and on the part of the College, Professors Silliman, Smith, Sanford, Hubbard, White, Lindsley, and Bacon.

Messrs. H. B. Smith, and Egbert R. Warner, both under age, asked permission to be admitted to an examination, to receive their diplomas, if successful, upon becoming of age: granted.

Mr. Franklin W. Hall asked to have the period of his medical studies shortened from three to two years on account of studies pursued in the Sheffield Scientific School: *Voted*, No.

The following gentlemen were then examined and recommended for the degree of M. D..

Edward Strong Dwight. Thesis, Quinia; its source, properties, and uses.

Frederick Hodges Hoadley, A. B. Thesis, Morbus Brightii.

Heman Bangs Smith. Thesis, The Physiology of Animal Heat.

Egbert Randal Warner. Thesis, Pulmonary Tuberculosis.

Edward Hubbard Welch. Thesis, Skin Grafting in Ulcers.

Voted, That Irving W. Lyon, M. D., be appointed to report the proceedings of this Board to the State Medical Society. Adjourned.

The Committee of Examination met pursuant to notice, Feb. 15, 1877, at the Medical College.

There were present on the part of the State Medical Society, A. W. Barrows, M. D., President; G. C. Jarvis, M. D., S. W. Turner, M. D., G. L. Platt, M. D., I. W Lyon, M. D.; and on the part of the College, Professors Smith, Sanford, Bacon, Hubbard, White, and Lindsley.

The following resolutions adopted by the Faculty, Dec. 13, 1876, were presented by the Dean to the Board of Examiners for their consideration and action.

Resolved, That, in the judgment of the Faculty, the best interests both of the college and of the students require that examinations for degrees should be wholly in writing (except when such examination being unsatisfactory, the student petitions for an oral examination, on the plea that he is unable to express himself well in writing), or wholly *viva voce*: provided, however, that any student, who has successfully passed the written examinations, may be required by the examining board to read and defend his graduating Thesis.

This resolution was discussed by the Board and its adoption agreed upon.

Second. *Resolved*, That it may be optional, for the present, for any student who has attended two full courses of lectures on anatomy, physiology, chemistry, or materia medica, to present himself for examination at the close of any regular term; and if his examination in any of these shall be satisfactory, it shall be regarded as final in these departments. Agreed to by the State Board.

The following gentlemen were then examined and recommended for the degree of M. D.:

William Henry Rand. Thesis, Intermittent Fever.

Curtiss Hinman Osborne. Thesis, Hygiene.

Wallace Harlow Dean. Thesis, Typhoid Fever.

Gregory Michaelian, A. B. Thesis, The Career of a Medical Student.

Charles C. Farnham applied to be examined for the degree of M. D. In his written examination he failed—then at his request he was admitted to an oral examination, after which the committee voted to pass him in the departments of physiology and practice.

The following gentlemen were examined and passed in special departments:

Franklin Wilson Hall. In Anatomy, Physiology, Chemistry, and Materia Medica.

John Philip Henriques. In Anatomy and Chemistry.

Charles Purdy Lindsley, P. L. B. In Anatomy and Chemistry.

Herbert Warren Little. In Materia Medica.

William Collin Welch. In Anatomy and Materia Medica.

Dr. L. S. Wilcox was appointed to address the graduates when the degrees should be next publicly conferred.

Dr. Frank W. Edgerton of Middletown was appointed alternate. Adjourned.

The plan by written examinations, now in use, seems admirably calculated to show at once the scholarship of the candidate, not only in medicine, but also in the English language. He is placed by himself and furnished a series of written questions from each professor, which he is required to answer in writing within the space of three hours, without access to any person, book, or other source of information, or without any previous knowledge of the questions to be answered.

These written questions with their answers in writing, together with the Thesis of the candidate, are submitted to the full Board of Examiners for inspection.

The applicant is also required to defend his Thesis before the Board. The members of the State Committee are further aided by the system of marking adopted by the Faculty, and reported to the full Board during the examination of each candidate.

IRVING W. LYON, M. D.,
Reporter.

PROCEEDINGS

OF THE

CONNECTICUT MEDICAL SOCIETY:

EIGHTY-SEVENTH ANNUAL CONVENTION,

1878.

PUBLISHED BY THE SOCEITY:
C. W. CHAMBERLAIN, M. D., Secretary,
187 ASYLUM STREET, HARTFORD.

THE CASE, LOCKWOOD & BRAINARD CO., PRINTERS,
HARTFORD, CONN.

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CONTENTS.

ESSAYS.

OBITUARIES.

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

The next Annual Convention will be held in Hartford, the 4th Wednesday in May, 1879, and remain in session during Thursday.

PROCEEDINGS

CONNECTICUT MEDICAL SOCIETY—EIGHTY-SEVENTH ANNUAL CONVENTION.

The President and Fellows of the Connecticut Medical Society met in the Common Council Chamber, City Hall, New Haven, May 22, 1878, at 3 P. M.

The President addressed the Fellows as follows:

Gentlemen and Fellows of the Connecticut Medical Society:

Although I did not know, until I received, a few days ago, from the Secretary, the programme of exercises, that I was expected to address both the meeting of the Fellows and the Annual Convention of the Society; still, I should deem myself ungrateful did I not thank you for the highest honor in your power to bestow, notwithstanding it imposes upon me duties and obligations which I declare, in no spirit of affected modesty, I feel imperfectly qualified to perform.

I congratulate the Society upon the privilege of again meeting in this delightful seat of learning, where it has so often before assembled, and where it may properly be said to have originated.

It is a good New England custom that assembles the family on the occasion of the Annual Thanksgiving under the parental roof, and one which the Connecticut Medical Society has, in a measure, very properly imitated.

The able and exhaustive address of Dr. E. K. Hunt on the Relations of this Society to the Benevolent Institutions of the State, and the admirable history of its formation and progress by Prof. Bronson, as well as numerous incidental allusions to these topics by various members in their addresses and dissertations, make superfluous by me more than a brief retrospection.

Another year, added to the more than threescore years and ten, finds our venerable society more vigorous than ever, and furnishing with its fruits the evidence of substantial progress.

Institutions for the benefit of suffering humanity already in existence have been sustained and fostered, and others, with similar beneficent aims, have been established upon a reliable foundation principally, if not wholly, through its agency.

The State Medical Society has ever been the friend and promoter of education, and among the earliest and most important of its duties was that of examining candidates for the practice of medicine and surgery, by a board annually appointed from its members, and legally empowered to issue licenses to practice to such as they deemed properly qualified.

It also, thus early in its history, established a standard of qualifications, making, on the part of the candidate, the attainment of his majority, the evidence of a good moral character, and certificate of three years' study with some reputable physician or surgeon, save in the case of college graduates (when two years were accepted), as pre-requisites to examination.

This method of qualifying students for practice was in vogue until the establishment of the Medical Institution of Yale College (by Act of the Legislature in 1810), when it gave place to the present admirably constituted board of examiners, with its systems of checks and balances, preventive of any hasty or improper exercise of its functions.

These efforts to substitute well-educated, conscientious practitioners for selfish and ignorant pretenders to medical knowledge, and thus stand between the public and fraud, have been but poorly rewarded by the laity, who have attributed them to a spirit of sectarian bigotry and selfishness.

The effect of this popular estimate of our motives and aims has resulted in the repeal of the clause in the charter of the State Society which denied to unqualified practitioners the right to collect their dues by process of law, thus removing the only barrier the State has ever erected to protect its citizens from the baneful influences of quackery.

An attempt to estimate the beneficial influence upon the progress of the healing art generally, which has been exerted by the great number of eminent practitioners who have gone forth from our ranks, and penetrated to the very confines of our vast territory, offers an inviting and appropriate topic for consideration, but the narrow limits which I have thought proper to assign to this paper forbid even an attempt at its development, and I therefore merely allude to it on account of its suggestiveness.

The present position of the regular medical profession, not only in this ancient commonwealth, but also throughout the country and the civilized world, is to my mind unique.

To-day legitimate medicine may be said, for the first time, to be without an important rival, and we are, seemingly, on the very threshold of an era which will impose upon us the unequalled responsibilities of the entire field of medical practice.

The rapid succession of discoveries in the various and numerous sciences which relate, directly or indirectly, to the practice of our art, have, in fact, destroyed the foundations of all opposing systems of general practice, and it only remains for us to await the slow process of a popular comprehending of the fact that what seems to be opposition is practically a distinction without a difference, to be inducted into an almost endless field of responsibility.

While we may well shrink from occupying a theater of labor thus indefinitely expanded, yet the duty is, nevertheless, imperative, and cannot be shunned.

Long since has the rapid march of true medical science imposed upon our profession the necessity for such broad culture, as well as high special attainments in spheres of general practice, as to discourage the most zealous and persevering students, and necessitate the distribution of its practical duties into a large number of specialties; thereby affording greatly increased advantages for a more thorough mastery of particular branches, as well as conducing, also, to still more rapid general progress.

It requires no more prophetic vision than the imagination, aided by the light of the immediate past with its thick crowding discoveries, to discern a field of labor which, probably, not my more venerable brethren nor I may behold, but into which our juniors possibly may be required to enter.

If so, preliminary to assuming such momentous responsibilities, they may well, in a becoming spirit of humility, put their shoes from off their feet, for the place whereon they tread is holy ground.

If this brief and imperfect review of the already burdensome and increasing duties of our professional life is correct, then, ever mindful of its brevity, we should be incited to renewed and, if possible, greater efforts than hitherto, to promote the efficiency of all the various organizations having for their object the perfection of the healing art, and the diffusion among the people of such knowledge as will tend to educate them up to the ability to dis-

criminate between the beneficent ministrations of the thoroughly educated, scientific physician, and the damaging, blind assaults of the ignorant charlatan.

In conclusion, I deem it my duty to advise you that there are matters of importance, relating to the code of ethics, in the hands of the Committee on Unfinished Business, which, inasmuch as they may prove disturbing elements in our society, will demand your careful consideration and judicious action. I also congratulate you on the establishment of a State Board of Health after many years of discouraging and apparently futile effort, and trust that the same determined spirit will continue to manifest itself in ways and means to promote its efficiency.

The President appointed Drs. C. W. Chamberlain, F. N. Braman, and J. H. Granniss, Committee on Credentials, who presented the following certified list of Fellows according to the returns from the County Clerks:

LIST OF FELLOWS, *Ex-Officio*.

President.

ROBERT HUBBARD, M.D.

Vice-President.

C. M. CARLETON, M.D.

Vice-Presidents, Ex-Officio.

W. A. M. Wainwright, M.D.	John Witter, M.D.
S. G. Hubbard, M.D.	William Deming, M.D.
*E. P. Bennett, M.D.	*F. L. Dickinson, M.D.
A. Woodward, M.D.	*G. C. H. Gilbert, M.D.

Treasurer.

F. D. Edgerton, M.D.

Secretary.

C. W. Chamberlain, M.D.

Committee on Matters of Professional Interest.

W. A. M. Wainwright, M. D. *H. W. Buel, M.D.
Ashbel Woodward, M.D.

*Absent.

FELLOWS ELECTED IN 1878.

Hartford County.

S. W. Rockwell, M.D.
G. W. Russell, M.D.
R. E. Ensign, M.D.
N. Mayer, M.D.
G. P. Davis, M.D.

New Haven County.

D. L. Daggett, M.D.
A. H. Churchill, M.D.
W H. Carmalt, M.D.
L. N. Beardsley, M.D.
*M. N. Chamberlain, M.D.

New London County.

A. Woodward, M.D.
*C. N. Brayton. M.D.
E. C. Kinney, M.D.
F. N. Braman, M.D.
L. S. Paddock, M.D.

Fairfield County.

James E. Barbour, M.D.
James G. Gregory. M.D.
Robert Lauder, M.D.
N. E. Wordin, M.D.
G. A. Shelton, M.D.

Windham County.

J. B. Kent, M.D.
T. M. Hills, M.D.
John Witter, M.D.
*Charles H. Rogers, M.D.
C. J. Fox, M.D.

Litchfield County.

*Henry W. Buel, M.D.
*Orlando Brown, M.D.
Luther H. Wood, M.D.
*Sam'l H. Huntington, M.D.
Theodore G. Wright, M.D.

Middlesex County.

J. H. Granniss, M.D.
M. C Hazen, M.D.
E. B. Nye, M.D.

Tolland County.

C. B. Newton, M.D.
G. H. Preston, M.D.
A. R. Goodrich, M.D.

*Absent.

Delegates from other Societies.

Dr. R. F. Weir. New York.
Dr. J. H. Bronson, Massachusetts.
Dr. E. E. Holt, Maine.

The following Committees were appointed by the President:

On Unfinished Business.—Drs. J. G. Gregory, N. Mayer, J. Witter.

On County Resolves.—Drs. G. W Russell, E. C. Kinney, N. E. Wordin.

On Gratuitous Students.—Drs. Wm. Deming, T. M. Hills, A. H. Churchill.

On Business.—Drs. T. G. Wright, G. P. Davis, C. W. Chamberlain.

On Honorary Degrees and Membership.—Drs. W. A. M. Wainwright, A. Woodward, E. B. Nye.

To Nominate Essayists.—Drs. L. S. Paddock, Jas. E. Barbour, M. C. Hazen.

Auditing Committee.—Drs. A. R. Goodrich, R. E. Ensign.

The Committee on Unfinished Business reported favorably on the following proposed amendments to the By-Laws, which had been favorably considered in 1877:

1. All Ex-Presidents of the Connecticut Medical Society shall hereafter be permanent Fellows.

2. Section 1, Chapter IV, shall read: "In each County five, except in the County of Tolland, which shall have three, Fellows."

3. The Secretary, when definitely informed that the Delegates to the American Medical Association, or to any State Society, cannot attend, may appoint substitutes.

Dr. M. C. White objected to the first as conflicting with the charter which limited the Fellows to the officers of the Society, and not more than five elected from each county.

The amendment was accordingly not passed.

There were some objections to the second.

Dr. Russell thought that it was undesirable to make any change, unless a general one was made on a representative basis.

Drs. Edgerton and Grannis spoke in favor of the amendment, showing that Middlesex County had more tax-paying members than several counties which had five Fellows; that the number was increasing, and that the county was fairly entitled to what it

asked, as its membership had nearly doubled since that apportionment was made.

Dr. Goodrich moved as an amendment that the words

"except in the County of Tolland,"

be stricken out.

Dr. Chamberlain stated such an amendment could not be made, as it must lie over a year. The amendment was withdrawn, and offered as a resolution, referred to a committee, which reported unfavorably subsequently, and the motion was lost.

On first ballot the amendment giving Middlesex County five Fellows received twenty-one votes, three less than the two-thirds required.

A motion to reconsider and vote by ayes and nays was passed:

Aye—Drs. Rockwell, Ensign, Mayer, Daggett, Carmalt, Beardsley, Woodward, Kinney, Paddock, Barbour, Lauder, Gregory, Wordin, Shelton, Witter, Fox, Wood, Wright, Granniss, Hazen, Nye, Newton, Preston, Goodrich, Wainwright, Hubbard, Carleton, Edgerton, Chamberlain—29.

As a misunderstanding concerning the nature of the first vote had meanwhile been corrected, no negative votes were cast; the amendment was therefore carried.

The third amendment was passed by more than the requisite vote.

Dr. S. G. Hubbard presented and read a memorial from the New Haven Medical Society concerning medical tramps. (See Appendix A.) It was voted to refer to a special committee to report to this Convention. Drs. Rockwell, Preston, and Lauder were appointed by the President.

A recess was then taken for election by the Fellows of the respective counties of a member of the Nominating Committee.

The following names were reported and read by the Secretary:

S. W. Rockwell, M.D., Hartford County.
D. L. Daggett, M.D., New Haven County.
L. S. Paddock, M.D., New London County.
James E. Barbour, M.D., Fairfield County.
John Witter, M.D., Windham County.
Luther H. Wood, M.D., Litchfield County.
J. H. Granniss, M.D., Middlesex County.
G. H. Preston, M.D., Tolland County.

The Treasurer's report was then presented as follows:

Indebtedness of the clerks of the different counties for tax laid in 1877:

New Haven—C. W. Gaylord,	$30.00
New London—W. S. C. Perkins,	6.00
Fairfield—W. C. Burke,	35.00
Windham—J. B. Kent,	6.20
Litchfield—T. G. Wright,	6.05
	$84.25

The accounts of Hartford, Middlesex, and Tolland counties were paid in full.

May, 1877, Balance in Treasury,	$207.96
Cash received during the year, .	542.32
	$750.28
Expended during the year, .	410.40
	$339.88

The expenses of publication were reduced $85.00 by receipts from advertising, and $28.00 by contributions from Hartford, Norwich, and Middletown.

The report was referred to the auditing committee with its accompanying vouchers, and upon their favorable report was accepted.

Dr. Wainwright presented a certificate of abatement from the Fellows of Hartford County for $24.00, uncollectible during his clerkship 1872–4, which was accepted by the Convention.

The Treasurer presented a resolution, "That the taxes due from the following ex-clerks be abated as outlawed most of them, and all uncollectible: G. A. Ward, New Haven County, '66–7, S. Sands and G. L. Beers, Fairfield County, and O. E. Miner, New London County.

After some discussion, the motion was passed, and the taxes abated.

The gain of $130 over the balance of last year shows an increased sense of the duty of discharging their just obligations to the Society among the members, and indicates an active and efficient management of the department. The outlook for the future is very encouraging.

The nominating committee reported the following list of officers, which was accepted, and officers elected as follow:

President—C. M. Carleton, M.D.
Vice-President—A. R. Goodrich, M.D.
Treasurer—F. D. Edgerton, M.D.
Secretary—C. W. Chamberlain, M.D.

Committee on Matters of Professional Interest.

W. A. M. Wainwright, M.D., H. W. Buel, M.D., Ashbel Woodward, M.D.

Committee on Examination.

M. Storrs, M.D., J. Witter, M.D.

Committee to Nominate Professors in Medical Institution of Yale College.

L. N. Beardsley, M.D., S. Lynes, M.D.

Committee to Nominate Physician to Retreat for the Insane.

L. Holbrook, M.D., H. M. Knight, M.D.

Committee on Publication.

C. W. Chamberlain, M.D., *ex-officio*, F. D. Edgerton, M.D., *ex-officio*, G. W. Russell, M.D.

Committee of Arrangements.

W. A. M. Wainwright, M.D., Anniversary Chairman, L. S. Wilcox, M.D., G. F. Hawley, M.D.

For Dissertators.

W. R. Bartlett, M.D., W. H. Carmalt, M.D.

Delegates to American Medical Association.

G. W. Russell, M.D., Wm. Deming, M.D., R. Hubbard, M.D., G. W. Burke, M.D., G. P. Davis, M.D.

Delegates to Maine Medical Society.

T. M. Hills, M.D., J. K. Bacon, M.D.

Delegates to New Hampshire Medical Society.

J. C. Jackson, M.D., G. H. Preston, M.D.

Delegates to Vermont Medical Society.

Wm. Wood, M.D., E. K. Leonard, M.D.

Delegates to Massachusetts Medical Society.

F. N. Braman, M.D., J. E. Barbour, M.D.

Delegates to Rhode Island Medical Society.

L. S. Paddock, M.D., J. H. Granniss, M.D.

Delegates to New York Medical Society.

L. S. Wilcox, M.D., W. Wood, M.D., F. Bacon, M.D., C. M. Carleton, M.D., E. B. Nye, M.D.

Delegates to New Jersey Medical Society.

C. A. Lindsley, M.D., R. S. Goodwin, M.D.

Delegates to Pennsylvania Medical Society.

B. H. Catlin, M.D., G. A. Shelton, M.D., G. L. Platt, M.D.

The Committee on Gratuitous Students reported the following names, filling the vacancies with those recommended from other counties:

Charles W. Moody, Plainville.
Robert J. Gibson, New Haven.
Manning Douglass, Hartford.
Andrew B. Gorham, Westport.
Charles G. Surridge, Vernon.
George O. Robbins, Roxbury.
George H. Hammond, Portland.
Eli P. Flint, Coventry.

The report was accepted and the committee discharged.

The following resolution was introduced and passed:

Resolved, That the Connecticut Medical Society be requested to appoint a committee of three to confer with a similar committee to represent the Medical College, to consider the propriety of making some changes in the charter of the Medical Institution of Yale College, with authority to co-operate with said committee in securing from the Legislature such alterations of the charter as may be mutually agreed upon.

Voted, That the Chair appoint such committee. The following were accordingly appointed:

C. W. Chamberlain, M.D.
Luther H. Wood, M.D.
H. P. Stearns, M.D.

The following amendments to the By-Laws were reported upon favorably by the Business Committee, and accepted by the Convention:

CHAPTER II, SECTION 5.—The second paragraph is hereby repealed, and the following substituted: "The Secretary shall send due notices of the annual meeting to each member, and publish notice of the same in three of the daily papers printed in this State."

CHAPTER IX—*Expulsion of Quacks.*—Said paragraph is hereby repealed, and the following substituted: "Each County Association shall have power to examine, discipline, or expel (in the manner prescribed in Section 7, Chapter IV, to which this shall be annexed), any member professing or avowing to practice allopathy, homœopathy, hydropathy, or according to any exclusive system or dogma."

On motion of Dr. Chamberlain, the second was unanimously adopted as a resolution by this Convention, as formulating our practice and belief that it is the province of the physician to avail himself of every means that can alleviate or cure, unhampered by any theory.

The Secretary was authorized to publish the By-Laws, incorporating changes already made.

Voted, That the annual tax for 1878 shall be two dollars, payable June 1st.

Voted, That six hundred copies of the Proceedings be published this year.

The report of the Committee on Examination was presented and read by the Secretary, and referred for publication.

A protest was read from New London County Society, and also from two members of the Committee on Examination, against licensing a candidate at the previous examination. After considerable debate, it was voted, That the Committee on Examination, in granting a license, did not exceed their legal powers, and that all papers on the subject be withdrawn from publication.

The following report of the Committee to Nominate Professors was presented:

At a meeting of the Joint Committee of the State Medical Society and the Corporation of Yale College, held at the office of President N. Porter,

at New Haven, on the 12th of September, 1877, there were present, Doctors Benjamin H. Catlin, William Deming, and Eliphalet Huntington, on the part of the State Medical Society, and President N. Porter and Rev. Myron N. Morris, on the part of the Corporation of Yale College.

The meeting was organized by the appointment of President Porter, Chairman, and E. Huntington, Clerk.

On motion, Doctor Lucian S. Wilcox of Hartford, Conn., was unanimously nominated Professor in the Medical Institution of Yale College.

Attest, ELIPHALET HUNTINGTON, *Clerk*.

The report was accepted.

The Committee on Honorary Members reported that no names were proposed.

The Convention then adjourned until 8 o'clock P.M.

EVENING SESSION.

The Convention reassembled at 8 o'clock P.M. The Vice-President, Dr. C M. Carleton, in the chair in the absence of the President.

The Committee to whom the memorial from the New Haven Medical Association was referred reported as follows:

The Committee would report that they have given the resolutions careful attention, and are impressed with the great importance of the subject to which they relate.

They believe that in the hands of a judicious committee a bill for a public act as recommended by the resolutions could be passed, that would meet the approval of the Legislature and the views of all educated practitioners among the various shades of medical opinion, and promote the best interests of all the community.

We therefore recommend the appointment of a committee of instructed to bring the subject of the memorial properly to the notice of the General Assembly, with power to invite the coöperation of such other chartered medical societies as seems expedient,—and to take such measures as may be necessary to secure the object in view.

S. W. ROCKWELL,
G. H. PRESTON,
ROBERT LAUDER.

The report was accepted and the Committee discharged.

The report was vigorously debated, principally on the question as to the time of action. Dr. S. G. Hubbard proposed that a bill be prepared and submitted to the next Legislature for action.

Dr. Chamberlain urged the necessity of well-considered action that would command the respect of all thinking men, and that would express the matured wisdom and experience of the Society, enlightened by the history of similar legislation in other States; that we had an important and urgent work on our hands in elevating the standard in our own ranks, and until that were well done we could not in consistency demand legislative protection.

Dr. Hubbard stated that the measure proposed was to protect the public rather than the profession, and we should be derelict in our duty did we not do all in our power to prevent evils of which we could best appreciate the magnitude. He alluded to the recent creation of the State Board of Health, and said it was probably due to the Society's lukewarmness that such legislation had been so long delayed. The speaker had positive knowledge that such a bill would meet the approval of the homœopathic physicians of New Haven, and he believed there were men in other schools of practice who would cooperate against the abominable system which now prevailed.

Dr. Mayer said that nothing could be lost by taking time enough to perfect a measure that would be creditable to the Society and do justice to the subject, which was certainly one of the greatest importance.

Dr. Wainwright moved that a copy of the proposed act be mailed to every member of the Society, in order that suggestions might be received, and that they might aid in creating public sentiment in its favor, or rather of explaining the true nature of the measure in their respective districts.

Dr. Chamberlain offered the following resolution:

The Chair shall appoint a committee, composed of one from each county, to draft an act to regulate the practice of medicine, and when approved by said committee, the Secretary of the Connecticut Medical Society shall cause such proposed act to be printed and sent to the members of the Society, and to the various County Societies, to be acted upon at their annual meetings. Said act to come up for final revision at the next annual Convention.

Dr. Hubbard moved to amend as follows: "Said committee shall have power to confer with other medical organizations in the State."

After some discussion, the motion as amended was passed.

The Chair appointed the following committee:

S. G. Hubbard, M.D., New Haven.

C. W. Chamberlain, M.D., Hartford.

L. S. Paddock, M.D., New London.
W. A. Lockwood, M.D., Fairfield.
H. M. Knight, M.D., Litchfield.
E. B. Nye, M.D., Middlesex.
T. M. Hills, M.D., Windham.
G. H. Preston, M.D., Tolland.

The Committee on County Resolves presented a report through their chairman, Dr. G. W. Russell, as follows:

The Committee on County Resolves having fully and at considerable length considered the matter referred to them concerning the action of the Fairfield County Medical Society in the matter of Dr. M. B. Pardee, beg leave to report that they would recommend that the subject be referred to the Fairfield County Medical Society for further consideration.

GURDON W. RUSSELL,
ELIJAH C. KINNEY.

Dr. Wordin presented the following minority report:

As a member of the Committee on County Resolves, I would respectfully report that in my opinion the action of the Fairfield County Medical Society, in the case of Dr. M. B. Pardee of South Norwalk, ought to be sustained.

N. E. WORDIN,
Member of Committee on County Resolves.

Dr. Lauder of Bridgeport, moved the acceptance of the minority report. A long debate followed, led by Drs. Lauder, Wordin, and Barbour in favor of the minority report, and Drs. Russell, Gregory, and Kinney in favor of the majority report, on the ground that charges were not proven.

On motion of Dr. Wainwright, the evidence was presented to the Convention and read, consisting of four affidavits and counter affidavits, and an oath sworn to by Dr. Pardee that he had not intended nor did not intend to transgress the By-Laws of the Society.

Dr. W. C. Burke, Clerk of the Fairfield County Association, read the minutes of the annual meeting, by which it appeared that four of the five charges were considered proven by the following votes:

First ballot,	11 aye,	7 nay,	total 18.
Second "	13 "	5 "	" 18.
Third "	17 "	3 "	" 20.
Fourth "	14 "	7 "	" 21.
Fifth "	5 "	14 "	" 19.

The following were the ballots for sentence in the County Society:

	Admonition.	Suspension.	Expulsion.
First ballot,	4	7	8
Second "	4	5	9
Third "	4	6	10
Fourth "	3	5	12

After protracted debate, lasting until near midnight, it was voted, on motion of Dr. Wainwright, that the votes be taken by ayes and nays. The motion was passed. The vote was first taken on the minority report.

Ayes.—W. H. Carmalt, Jas. E. Barbour, Robert Lauder, N. E. Wordin, John Witter—5.

Nays.—S. W. Rockwell, G. W. Russell, N. Mayer, E. C. Kinney, L. S. Paddock, T. M. Hills, C. J. Fox, J. H. Granniss, M. C. Hazen, J. G. Gregory, A. R. Goodrich, W. A. M. Wainwright, Wm. Deming—13.

It was moved that, pending action by the County Society, Dr. M. B. Pardee be suspended, not to exceed one year. It was decided that action could be taken only with reference to previous action by the County Society.

The vote was then taken on the majority report.

Ayes.—Rockwell, Russell, Mayer, Kinney, Paddock, Hills, Fox, Granniss, Hazen, Gregory, Goodrich, Wainwright, Deming—13.

Nays.—Carmalt, Witter, Barbour, Lauder, Wordin—5.

It was then voted that the Convention adjourn to the fourth Wednesday in May, 1879, to meet at Hartford.

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

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held in the Common Council Chamber, City Hall, New Haven, Thursday, May 23d, at 9 A. M., Dr. R. Hubbard in the President's chair. The Secretary's report was presented, as follows:

The year has been marked by an unusually large mortality, and somewhat greater than the usual average throughout the country.

The average age of the sixteen who have died since our last meeting is sixty-two, which exceeds the average—fifty-eight—for the profession in this country. Ten of the sixteen were over seventy,—the youngest twenty-nine years of age.

Three honorary members of this Society have died—Dr. Thos. H. Sanborn of New Hampshire, Prof. Nathan R. Smith of Maryland, Dr Hiram Corliss of New York.

Thirty-one new members have been added through the various county societies. There have been a few removals and dismissals; so that the Society now numbers 395 against 384 last year—a gain of eleven. The following is the list of new members:

T. D. Crothers, M.D., Albany, 1875, Hartford.

R. B. Talbot, M.D., College of Physicians and Surgeons, 1877, Hartford.

C. W. Page, M.D., Harvard, 1870, Hartford.

George L. Parmele, M.D., Long Island Medical College, 1869, Hartford.

I. P. Fiske, M.D., New York University, 1875, Southington.

G. W. Steadman, M.D., Bellevue, 1875, Southington.

E T. Bradstreet, M.D., College of Physicians and Surgeons. 1877, West Meriden.

F. H. Whittemore, Bellevue, 1874, New Haven.

C. P. Lindsley, M.D., Yale, 1878, New Haven.

E. M. Child, M.D., New York University, 1877, West Meriden.

Harry Fleichner, M.D., Yale, 1878, New Haven.

J. D. Nelson, M.D., College of Physicians and Surgeons, 1875, North Stonington.

J. G. Stanton, M.D., Bavaria, 1873. New London.

L. B. Almy, M.D., Bellevue, 1876, Norwich.

Anthony Peck, M.D., New York University, 1875, Norwich.

M. H. Wakeman, M.D., Yale. 1854, Reading.

M. V B. Dunham, M.D., Harvard, 1867, Greenfield Hill.

F. Gorham, M.D., Yale. 1876, Weston.

Richard L. Bohannan, M.D., N. Y. University, 1874, Darien.

Robert Nolan, M.D., Vermont University, 1877, Norwalk.

M. G. Bensch, M.D., Bellevue, 1877, Bridgeport.

Edwin Nooney, M.D., College of Physicians and Surgeons, 1871, Stratford.

Thomas Reid, M.D., New York University, 1876, Trumbull.

C. H. Osborne, M.D., Yale, 1876, Southport.

C. J. Fox, M.D., New York University, 1876, Willimantic.

C. F. Couch, M.D., Berkshire, 1863, Gaylordsville.

S. H. Huntington, M.D., Yale, 1876, Bethlehem.

J. W. Phelps, M.D., Castleton, 1846, Wolcottville.

W. P Swett, M.D., University of Vermont, 1876, Harwinton.

William E. Fisher, M.D., University of Pennsylvania, 1876, Middletown.

Charles E. Stanley, M.D., University of Pennsylvania, 1876, Middletown.

Dr. R. Hubbard presented the annual address, on "The Mutual Relations of the Public and the Regular Medical Profession."

The thanks of the Convention were voted to Dr. Hubbard, and a copy requested for publication.

Dr. A. M. Shew of Middletown, presented the "Dissertation on Insanity, in its Relations to Law."*

Dr. Wainwright presented the report of the Committee on Matters of Professional Interest.

Dr. Lindsley presented the following report of the Committee on State Board of Health:

REPORT OF THE COMMITTEE ON STATE BOARD OF HEALTH.

The Committee have the pleasure to report that success crowned their efforts this year, and that Connecticut has enrolled herself among the number of States recognizing the services that rational, scientific medicine can render.† Several meetings were held in connection with a committee from the American Medical Association, and the following petition was presented to the Legislature by the combined committees:

To the Honorable the Senate and House of Representatives in General Assembly convened:

The committees appointed by the American Medical Association and the Connecticut Medical Society in 1877, to urge upon the Legislature of this State the importance and necessity of creating a State Board of Health and Bureau of Vital Statistics, would hereby respectfully petition your honorable bodies in favor of an act having this object in view.

In support of this measure they would urge that the experience of the most civilized countries of the world, and of many States in this country, have unequivocally shown that great benefits accrue to the State

* This paper, in an extended form, may be found in the *Journal of Insanity*, edited by Dr. Gray.

† Nineteen States have now such organizations. Rhode Island and Kentucky established since Connecticut.

from such organizations, in preserving the health and prolonging the lives of the people, as shown by the lessened amount of sickness and diminished death-rate where these sanitary measures are enforced, and in the suppression of pauperism, vice, and crime, in the production of which unsanitary conditions have a close and causative relation. These organizations, besides thus promoting the prosperity of the State, are also, as has been abundantly demonstrated, of direct pecuniary benefit; repaying the necessary expenditure many times. Moreover, the educational influence exerted upon the people by such boards in popularizing the established principles of sanitary science so that they would be generally recognized and acted upon, would alone justify their existence.

While there are many excellent provisions in the statutes upon these subjects, it is impossible to secure an efficient sanitary service in the State without a central supervisory body which can intelligently survey the whole field and convert the straggling and desultory workers into a well-drilled and efficient sanitary corps, acting in harmony throughout the entire State, instructed and equipped with all the resources modern science affords in preventing the rise, development, and spread of epidemic, infectious, and contagious diseases, and resisting the inroads of disease and death among the people of this commonwealth. It is also impossible to secure accurate and complete vital statistics, the data upon which depends all our knowledge of the laws of the causes and prevention of diseases, as well as any advance in knowledge of the means of control, without some such organization.

Your petitioners therefore earnestly request that you will look upon this measure in all its important relations to public prosperity, and give your official sanction by enacting the measures herein proposed.

B. H. Catlin, M.D., *Chairman*,
George C. Jarvis, M.D.,
A. Woodward, M.D.,
Committee of American Medical Association.

C. A. Lindsley, M.D., *Chairman*,
C. W. Chamberlain, M.D.,
J. C. Jackson, M.D.,
H. M. Knight, M.D.,
Lewis Williams, M.D.,
Committee of Connecticut Medical Society.

The measure was propitiously introduced to the legislature, and placed in the hands of the desired committee—that on the Judiciary—to a great extent through the influence of Dr. J. C. Jackson of Hartford. The Committee, while reporting adversely on the ground of the inexpediency of any new appropriations, were generally convinced of the merits of the bill. The only other

opposition, besides the usual ones in securing any measure of utility, was some factious medical opposition, principally from misapprehension of the nature of the measure. There was a full delegation at the hearing before the Committee, and the subject was fairly presented, and received a considerate and appreciative treatment. The final success of the measure was largely due to the untiring efforts of Dr. N. Mayer of Hartford, who labored early and late in its behalf.

In the Legislature the measure was intelligently presented and explained by the Hon. John Houston of Enfield, and indeed passed mainly through his public-spirited advocacy. The subject was throughout treated with fairness and consideration by the Legislature. The Governor appointed as members of the Board—

Dr. J. S. Butler,	Dr. C. A. Lindsley,
Prof. W. H. Brewer,	A. E. Burr,
Dr. R. Hubbard,	A. C Lippitt,

and on the first meeting for organization Dr. J. S. Butler was chosen President, and Dr. C. W. Chamberlain appointed permanent Secretary.

The first regular meeting will be held in July. Communications and suggestions are requested from the physicians of the State. In the fall and winter the Board will be prepared to receive applications for lectures in any part of the State on the various departments of Public Hygiene.

C. A. LINDSLEY,
C. W. CHAMBERLAIN,
H. M. KNIGHT,
J. C. JACKSON,
LEWIS WILLIAMS,
Committee on State Board of Health.

The following is the bill as passed:

AN ACT ESTABLISHING A STATE BOARD OF HEALTH.

GENERAL ASSEMBLY,
JANUARY SESSION, A. D. 1878.

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

SECTION 1. That the governor, by and with the advice and consent of the senate, shall appoint six persons, three of whom shall always be physicians, and one lawyer, who, together with a secretary to be elected

by them, shall constitute the State Board of Health. Of the six persons first appointed, two shall serve for two years, two for four years, and two for six years, from the first day of July next following their confirmation, and the governor shall hereafter biennially appoint, by and with the advice and consent of the senate, two members of said State Board of Health, to hold their offices for six years from the first day of July next following their confirmation. If a vacancy occur in said board during a recess of the legislature it shall be filled by the governor until the next regular session of the same.

SEC. 2. That the State Board of Health shall meet at least once in every three months, and as much oftener as they may deem proper. Four members shall always constitute a quorum for business. No member of the board shall receive any compensation except the secretary, but the actual traveling and other expenses of the members while engaged in the duties of the board shall be allowed and paid out of the appropriation made for its support. They shall select annually one member of the board as president, and shall appoint a suitable person, who shall be a physician, to be their permanent secretary and executive officer, who shall hold his office so long as he shall faithfully discharge the duties thereof, but who may be removed for cause at any meeting of the board, a majority of the members voting therefor. If a member of the board be elected as secretary the vacancy thus caused shall be filled by the governor, as provided in section first.

SEC. 3. That the secretary shall keep a record of the acts and proceedings of the board, perform and superintend the work prescribed in this act, and such other duties as the board may order under their general direction, and shall receive an annual salary of $1,000, which shall be paid him in the same manner as the salaries of other state officers are paid, and such necessary expenses as the comptroller of the treasury shall audit, on the presentation of an itemized account, with vouchers annexed and the certificate of the board, shall be allowed him.

SEC. 4. That the said State Board of Health shall take cognizance of the interests of health and life among the people of this state; they shall make sanitary investigations and inquire respecting the causes of disease, and especially of epidemics, the sources of mortality, and the effects of localities, employments, conditions, *injesta*, habits, and other circumstances upon the public health; and they shall collect such information in respect of these matters as may be useful in the discharge of their duties, and contribute to the promotion of health and the security of life in this state; they shall cause to be made by their secretary or by a committee of the board, inspections at such times as they may deem best, and whenever directed by the governor or the legislature, of all public hospitals, prisons, asylums, or other public institutions, in regard to the location, drainage, water supply, disposal of *excreta*, heating and ventilation, and other circumstances in any way affecting the health of their inmates, and shall also suggest such

remedies as they may consider suitable for the removal of all conditions detrimental to health in the said institutions, in writing, to the officers thereof.

SEC. 5. That the said board shall cause all proper sanitary information in its possession to be promptly forwarded to the local health authorities of any city, village, town, or county in this state, which may request the same, adding thereto such useful suggestions as the experience of said board may supply. And it is also hereby made the duty of said local health authorities to supply the like information and suggestions to said State Board of Health, together with a copy of all their reports and other publications. And said board of health is authorized to require reports and information (at such times and of such facts, and generally of such nature and extent, relating to the safety of life and promotion of health, as its by-laws or rules may provide) from all public dispensaries, hospitals, asylums, infirmaries, prisons, and schools, and from the managers, principals, and officers thereof; and from all other public institutions, their officers and managers, and from the proprietors, managers, lessees, and occupants of all places of public resort in the state; but such reports and information shall only be required concerning matters or particulars in respect of which it may in its opinion need information for the proper discharge of its duties. Said board shall, when requested by public authorities, or when they deem it best, advise officers of the state, county, or local government in regard to sanitary drainage, and the location, drainage, ventilation, and sanitary provisions of any public institution, building, or public place.

SEC. 6. That it shall be the duty of the State Board to give all information that may be reasonably requested, concerning any threatened danger to the local health officers, and all other sanitary authorities in the state, who shall give the like information to said board: and said board and said officers, and said sanitary authorities shall, so far as legal and practicable, co-operate together to prevent the spread of disease, and for the protection of life and the promotion of health, within the sphere of their respective duties.

SEC. 7. That said board may, from time to time, engage suitable persons to render sanitary service and to make or supervise practical and scientific investigations and examinations requiring expert skill, and to prepare plans and reports relative thereto. And it is hereby made the duty of all boards and agents, having the control, charge, or custody of any public structure, work, ground, or erection, or any plan, description, outlines, drawings, or charts thereof, or relating thereto, made, kept, or controlled under any public authority, to permit and facilitate the examination and inspection, and the making of copies of the same by any officer or person by said board authorized; and the members of said board, and such other officer or person as may at any time be by said board authorized, may, without fee or hindrance, enter, examine, and

survey all such grounds, erections, vehicles, structures, apartments, buildings, and places.

SEC. 8. That it shall be the duty of the State Board of Health to have the general supervision of the state system of registration of births, marriages, and deaths. Said board shall prepare the necessary methods and forms for obtaining and preserving such records, and to insure the faithful registration of the same in the several counties, and in the central bureau of vital statistics at the capital of the state. The said Board of Health shall recommend such forms and amendments of law as shall be deemed to be necessary for the thorough organization and efficiency of the registration of vital statistics throughout the state. The secretary of said Board of Health shall be the superintendent of registration of vital statistics. As supervised by the said board, the clerical duties and safe keeping of the bureau of vital statistics thus created shall be provided for by the comptroller of the state, who shall also provide and furnish such apartments and stationery as said board shall require in the discharge of its duties.

SEC. 9. That the said board, on or before the first day of December in each year, shall make a report in writing to the governor, upon the vital statistics and the sanitary condition and prospects of the state, which report shall also set forth the action of said board, and its officers and agents, and the names thereof of the past year, and shall contain a full statement of their acts, investigations, and discoveries, with such suggestions for further legislative action or other precautions as they may deem proper for the better protection of life and health. This report shall also contain a detailed statement of the moneys expended by said board, and the manner of their expenditure the year for which it is made; but the total amount paid for the expenses of this board, including the salary and expenses of the secretary, shall not exceed $3,000, which amount is hereby annually appropriated for this purpose, to be paid by the treasurer, on the comptroller's warrant, in such sums as the certificate of the board, with proper vouchers annexed, may certify from time to time.

SEC. 10. That this act shall take effect from the date of its passage; and that all acts or parts of acts inconsistent herewith, be, and the same are hereby, repealed.

Dr. R. F. Weir, from the New York Medical Society; Dr. J. R. Bronson, from the Massachusetts Medical Society; Dr. E. E. Holt, from the Maine Medical Society, were introduced to the Convention by the president, and presented the greetings of their societies with brief speeches.

Drs. Russell, Hills, and Chamberlain, as delegates to Philadelphia, Rhode Island, and Massachusetts respectively, reported to the Convention.

The following essays were then read:

The Etiology and Treatment of Puerperal Convulsions.—L. S. Paddock, M.D.

Therapeutics of Throat and Ear Disease.—S. H. Chapman, M.D.

Uterine Contractions as a Hemostatic.—E. P. Swasey, M.D.

The thanks of the Convention were voted to these gentlemen, and copies of their papers requested for publication.

Dr. G. P. Davis then gave a very interesting demonstration of Antiseptic Surgery, with exhibition of apparatus and methods, prefaced with a brief outline of the theory and results of treatment. He was followed by Drs. Bronson of Massachusetts and Weir of New York, with reports of the success following the method in Boston and New York. Dr. Weir stated that while thymol, the new antiseptic, was preferable for many reasons to carbolic acid, it was not so efficient.

The following voluntary communications were presented:

Empyema—James E. Barbour, M.D.; Hemiplegia Alternans—W. C. Burke, M.D.; Cardiac Thrombosis—I. W. Lyon, M.D.

The thanks of the Convention were voted these gentlemen, and copies of their papers requested for publication.

The following were read by title only, and referred to the Committee on Publication:

A Review of the Surgical Literature of the Year.—W. A. M. Wainwright, M.D.

Treatment of Thecal Abscess and Carbuncle.—B. F. Harrison, M.D.

Cough from Recurrent Congestion.—C. W. Chamberlain, M.D.

Extra Uterine Pregnancy.—E. F. Coates, M.D.

Stammering from the Results of R. R. Injury.—P. Jewett, M.D.

The Committee to Nominate Essayists reported the following names:

W. A. Lockwood, M.D.,
N. Mayer, M.D.,
H. P. Stearns, M.D.,
R. S. Goodwin, M.D.,
J. B. Kent, M.D.,
S. H. Bronson, M.D.

The Convention adjourned for the annual dinner at 3 P. M.

Attest: C. W. CHAMBERLAIN,
Secretary.

PRESIDENT'S ADDRESS.

THE MUTUAL RELATIONS OF THE PUBLIC AND THE REGULAR MEDICAL PROFESSION.

R. HUBBARD, M.D., BRIDGEPORT.

Gentlemen and Members of the Connecticut Medical Society:

It is but natural that, in matters pertaining to such momentous interests as human life and health, mankind should have made, both within and without our profession, the most strenuous efforts to discover some complete *science* of medicine, or universal *law* of *cure*, by which to determine all measures adopted for their protection.

These efforts hitherto have been, and I think always must be, from the nature of things, futile.

Although we frequently use the term science as a convenience of language, in the sense of accumulated knowledge upon some particular subject or art, and, accordingly, to characterize medicine; still much more than this is required to elevate any branch of learning to the dignity of a science.

Sir William Hamilton briefly but tersely defines science to be "A complement of cognitions, having, in point of form, the character of logical perfection, and, in point of matter, the character of real truth."

In the sense of completeness and unity of parts implied in this definition, medicine is not a science, but rather a combination of sciences covering, scientifically, only parts of the broad field of duty we are obliged to occupy, and exhibiting here and there numerous wide chasms to be bridged over by rules for action deduced from rational experience.

We hear much denunciation of Empiricism, and the term, with its ugly sound, is hurled at the devoted head of quackery with as much confidence as though it were the most convincing syllogism in our language.

Now I ask whether this is not inconsiderate, and inconsistent with the etymological or better sense of the term in which it is frequently employed? I have no quarrel with any one on account of his condemnation of charlatanism, but so long as we have not sufficient demonstrated theories to cover the whole ground we must occupy, Rational Empiricism—or experience—must supply the deficiency.

Rapid as has been the progress, and numerous and brilliant as have been the discoveries, especially during the last twenty-five years, by our profession and their co-laborers, by means of instruments of precision in diagnosis; the great attainments in physiological chemistry; the rapid advances of the sciences of physiology and pathology, of which we may well be proud; we still are obliged to find our way in many directions by the fainter light of experience, or rational empiricism.

Daily the practical physician is obliged to accomplish some of his best, and not infrequently, I apprehend, *the best*, of his results by this method,—however unsatisfying it may be to be deprived of that God-given palliation of the primitive curse which doomed man to earn his bread by the sweat of his brow,—the delight of comprehending the philosophy which underlies and fully explains the principles of his art or profession.

If the practitioner should refuse to administer a dose of ipecac or rhubarb to his patient when either was clearly indicated, until he could comprehend its *modus operandi*, he would never give it.

And this is equally true in regard to a majority of the articles of the *Materia Medica*, notwithstanding the praiseworthy and invaluable labors of Headland, who has done so much in his efforts to make a scientific classification of remedies based upon their modes of accomplishing their results.

While we should in nowise relax our efforts in scientific investigation, we may profitably imitate the habits and close and patient observation of the phenomena of disease at the bedside by our brethren of the past, who were almost solely dependent on precedents established by experience for guidance in their practical duties.

Imperfections do not alone pertain to medicine, but are manifest in all systems of human knowledge, many of which are admitted to come within the definition of true sciences; as witness the mutations in botany, chemistry, etc.

For instance, many individuals in botany have been frequently

shifted from one genus to another within our recollection, and numerous chemical compounds whose constituents and modes of combination were supposed to have been accurately determined, have been obliged to submit to a similar correction.

Acknowledging thus briefly the imperfections of our art, and deprecating the disposition of the public to judge us by the criterion of scientific perfection, I proceed to consider some of the mutual relations of the regular medical profession and the public and other systems of practice to show, in some degree, what it has done for it, and what its representatives have a right to expect in reciprocation.

To establish and foster institutions for the benefit of the sick, the unfortunate, and the vicious; to influence legislation so as to promote public health and morals; in fine, to aid in every good word and work, have been accepted as cardinal obligations by our profession from the earliest period in which it can be said to have had any organization.

Time would fail me to indicate in detail the rich harvest which the public have reaped from this field.

The regular medical profession has alone, from the earliest times hitherto, stood between the public and all sorts of medical pretenders and impostors.

In fact this is one of the prominent obligations imposed upon us by our code of ethics. In the infancy of systematic medical training the Asclepiadæ imposed the most rigid restrictions upon all practitioners in the profession; and in these were included all who had taken the Hippocratic oath; not only to prevent *them* from performing certain duties for which they were unqualified, but also, especially, to furnish a reason for curtailing the doings of the quacks and charlatans who infested society.

Hydropathy, Thompsonism, Botanicism, and other exclusive systems require only a passing notice, as these one-sided and inadequate theories no longer confront us in the general field of practice as competitors for public favor; therefore, as I do not propose to make a post-mortem examination of defunct systems, I pass on to a brief consideration of the attitude of our only two remaining opponents—Homœopathy and Eclecticism.

Towards the public the attitude of the former (Homœopathy) is, and has long been, one of hypocrisy; towards us, our principles and practice, one of unmitigated, persistent denunciation.

At first they made the hiatus between themselves and us as wide

as possible, characterizing our practice before the public as unphilosophical, and even homicidal.

In the zeal of their new-born faith in the dogmas of the Hahnemannic system for a time they were guided in their practice by its theories, but soon began to discover that there is no royal road to success, even in medicine, and that the expectation of great results from inadequate causes was an absurdity, and could not be realized. As a comet in its eccentric wanderings, after reaching the natural limit of its course, is compelled by an inevitable law to draw nearer and nearer to the great center of attraction, so they have gradually more and more gravitated towards the only true and sensible system—that of rational medicine.

Homœopathy—to-day—tried by the criterion of its standard literature, does not exist; its votaries have long since, without a visible struggle, abandoned one of its only two distinctive dogmas, viz., that of the potency of infinitesimal doses of articles of the *Materia Medica*, and have made such rapid progress in the administration of the "raw material," that it requires a practitioner of no ordinary courage in the "Old School" to emulate their heroism.

I will give a single instance, among numerous similar ones, which have come under my own observation: A gentleman had been troubled with insomnia for several nights, until he was driven to the verge of mania, and hoping to obtain relief by the diversions of a change, visited a brother in my vicinity. Doubtful of his ability to woo successfully "tired nature's sweet restorer," the latter proposed to his brother to consult some physician.

Accordingly they went to the office of an ex-president of the Connecticut Homœopathic Society, to whom the case was stated. In reply the doctor said, "That can be easily managed; I will give you a couple of Dr. Hammond's doses of bromide of potassium." He wrote for sixty grains of the bromide, to be divided into two powders; one to be taken at bedtime and the other in two hours, unless sleep was produced. The directions were implicitly obeyed, and notwithstanding the sixty grains of bromide of potassium, he passed an excited, wakeful night, and sent for the doctor in the morning, who wrote a prescription for a fluid ounce mixture, containing two grains of sulphate of morphine and two drachms of hydrate of chloral, in ordinary menstruum; and directed him to take a teaspoonful once in two hours until sleep was produced. I respectfully submit whether there is among this audience a medical man who would order one-quarter grain doses of morphia and fifteen

grains of chloral up to the eighth dose without taking his place at the bedside to protect his patient from the hazardous effects of swallowing two drachms of chloral and two grains of morphia within seven to nine hours. And yet this distinguished representative of *infinitesimalism* went about his ordinary business giving his patient *carte blanche* to swallow the contents of the bottle in cumulative doses in this short period of time.

And further, their assumed infallible law of cure—*similia similibus curantur*—does not seem to be free from danger of a violent death at the hands of its friends when the assertion is made by the public press, without contradiction, that the question is seriously discussed in their conventions whether they shall abandon that dogma also, and thus give the *coup de grâce* to the whole system.

And the representatives of this system—if it can be with propriety so called—are they who charge us with illiberality, bigotry, and even inhumanity because we refuse to meet them at the bedside of the sick.

Our answer to all this is simple,—we believe the homœopathic system to be false in theory and pernicious in practice, and therefore that we have no moral right to pursue such a course as will indicate to the public that it is worthy of confidence. This is not stronger than the language of Hahnemann himself. He asserts in his preface to the "Organon" that the "old system" of medicine followed for the previous twenty-five hundred years was the "exact opposite" of his own newly-discovered, true healing art, as "opposite as day is to night." and after grudgingly paying to the "old system" the dubious compliment of permitting one per centum of its victims to escape death, emphatically declares that there can be no compromise between the two schools.

He further adds: "Homœopathy, if rightly apprehended, will be found *so exclusive*, and in that way only serviceable, that, as the doctrine is pure, so must the practice be also; and all backward straying to the pernicious routine of the 'Old School' is totally impossible."

The Eclectic System, our second and last competitor for public favor, is an outgrowth or culmination of Thompsonism and the Botanic System.

This, too, like all exclusive systems of medicine, offers no new principles that will bear critical analysis, but is characterized rather by an arbitrary selection of certain articles of the *Materia Medica*, giving preference without any good reason to those de-

rived from the organic kingdom, and denouncing a large portion of those derived from the inorganic as "baleful" and "poisonous in their character, having for their use no necessity or justification." Those articles "wholly and unqualifiedly" excluded from the catalogue of remedies are—"the several compounds and preparations of mercury, arsenic, antimony, and lead."

The absurdity of this arbitrary distinction between articles of the *Materia Medica*, derived from the two different sources indicated, is manifest in the fact that they both rest their claims to rank as remedies on precisely the same grounds, viz., the experience and observation of those who have tried them.

In the preface of the American Dispensatory (Eclectic for 1870), the author, although condemning the use of all mercurial preparations, adds: "In the appendix will be found an amount of *selected* matter of a *valuable* character, consisting of Obsolescent or Mineral Poisonous Agents; Mineral Waters; Tables of Weights, etc. . which will be of much value to the chemist and pharmacist, and which we hope will prove acceptable to *all*."

Were it not for the context, this, after what he has said in condemnation of mercurials, might be considered ironical.

Impressed with the formidable appearance of the list of mercurials under the title of "Obsolescent Remedies," I had it compared with the preparations of mercury in the U. S. Dispensary, and found it exceeded them by twelve, with as many, if not more, preparations of arsenic, antimony, and lead, as additional attractions.

While Homœopathy has done much harm and no good except incidentally when it was more consistently practiced, by affording opportunities for observing the course and termination of diseases undisturbed by medication, the Eclectics, by calling the attention of the profession and the public to the indigenous articles of our *Materia Medica*, have contributed to a more accurate knowledge of their value as remedies.

While we believe that legitimate medicine has placed mankind under lasting obligations by its partially successful efforts to shield it from quackery, yet this service sinks into insignificance in comparison with the numberless discoveries in the scientific and other branches of medicine made by its votaries.

It can fairly claim the whole field of surgery with all its array of instruments and apparatus, and a literature that is not only discouragingly abundant, but wellnigh perfect. We, as Amer-

icans, have reason to be proud of the fact that, under the liberal patronage of our government, the medical and surgical staff of our army have produced the most complete work on military surgery, and the most thorough and reliable description of the character and treatment of diseases in military campaigns, to be found in any language.

And as for instruments of precision in diagnosis, such as, the stethoscope, ophthalmoscope, endoscope, laryngoscope, and many others, who is there to gainsay our title to them all?

The same general claim can be made in regard to the literature and sciences which shed their light on our professional pathway.

Although much has been written which has been shown by the clearer light of a later date to be unsound in theory, and, consequently, has been abandoned, still enough remains that is reliable and of permanent value to constitute an imperishable monument to the learning, the industry, and the honesty of our predecessors and cotemporaries.

REPORT

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

It was the aim of your Committee to obtain a thorough report on matters of professional interest from each county of the State. In this endeavor they have met with more than ordinary success. The reporters of the different counties have done their work faithfully and well, as a perusal of the following full and interesting reports will show. A somewhat different course from that of former years has been pursued by the committee, viz.: in giving each county report in full, and not attempting to make a digest of them. It was thought that in this way our report would be of much more interest to the members of the Society. Each member is of course mostly interested in his own county, and although he may have done nothing to aid his reporter, still he will be interested to see what has been done by others.

In order to recall to mind the questions which were sent out by the Committee, the list is given herewith:

1. What diseases have prevailed in your locality during the past year?
2. Has there been any serious epidemic?
3. To what extent has typhoid fever prevailed?
4. Have you observed any change in the type of typhoid fever during the past ten years? (Is the disease as frequent, severe, or fatal as formerly?)
5. In what percentage of cases of zymotic diseases have you been able to trace the exciting cause to bad sewerage, drainage, etc.?
6. Have you ever known a case of typhoid or scarlet fever or diphtheria to arise *spontaneously?* (Every possible source of transmission from some previous case having been eliminated.)
7. To what extent have diseases of malarial origin increased in your neighborhood during the past year?

8. In vaccination, do you use bovine or humanized virus?

9. What has been your percentage of successful vaccinations during the past year?

10. Have you ever observed any serious trouble to arise from vaccination? (State cases and kind of virus used.)

It would seem expedient to make some explanation concerning question No. 6, which seems to have puzzled some of those who have answered it, as well as those who have made no attempt to do so. It may or may not be generally known that concerning the cause of typhoid fever (and it was to that disease especially that your attention was intended to be called), there are two distinct theories:

1st, The theory that the poison of typhoid fever *originates* in the decomposition of organic substances. This is the doctrine of Murchison, and the name pythogenic fever (produced by putrefaction), proposed by him, is based upon this opinion.

2d, The theory first established by Budd, that the poison of typhoid fever is propagated continuously, and *never originates de novo*. This belief is followed most firmly by Liebermeister, who says, "We can lay it down as a rule, *without exception*, that typhoid fever only appears in a locality previously free from it, when a case of the same disease has been introduced." Again, "Typhoid fever requires the presence of the specific poison, a poison which is introduced, and *not* developed spontaneously, and this specific poison finding an appropriate soil, produces an epidemic." In another place he says, "Typhoid fever never originates spontaneously, but by a continuous transmission of the poison."

Again he says: "From all that has been said it results that the real cause, in our opinion, of every epidemic and of every isolated case of typhoid fever is only the specific poison of typhoid fever. All the numerous conditions which have been called causes are not real causes. If the specific poison is absent, every other evil influence may act on the population, without producing typhoid fever." In the opinion of Sir W. Jenner, "the best mode of settling the question of the spontaneous origin of typhoid fever is to thoroughly scrutinize every isolated case that occurs in out-of-the-way country places." It was to elicit an expression of opinion from the profession in this State, respecting these two theories, and to obtain, if possible, some statistics bearing thereon, that question No. 6 was suggested, and the Committee has no cause to regret that it was asked.

When we take into consideration the fact that in Great Britain there are annually 140,000 cases of typhoid fever, of which 15,000 prove fatal, and where it is shown that in the United States 37,605 persons die of this disease in one year (this statement is based upon the mortality returns of the United States census of 1870), it behooves us to study the disease with care in all its bearings; and of these, there is surely none of greater importance than its Etiology. This whole subject is very ably and exhaustively set forth in a "Report on Advances in Hygiene and Public Health," by Dr. L. S. Joynes of Richmond, Secretary of the State Board of Health of Virginia. The Report can be found in Vol. II, Part II, of the Transactions of the Medical Society of Virginia, and it will amply repay a careful perusal.

It was the intention of your Committee to report upon the Vital Statistics of the State. This was found to be unnecessary, because a full and able report upon that subject had been prepared by the Secretary of the State Board of Health. As he is the proper person to make the Report on Vital Statistics, it is to be hoped that he will hereafter consider it a part of his duty to make, each year, such a report to the Society.

It seems fitting that the statement should be made here (although the fact is probably known to all), that the Society has finally accomplished the object for which it has battled with the Legislature of the State for the past few years, viz., the establishment of a State Board of Health. Such an act was passed at the last session of the Legislature, and now our State will be able to take her proper place, so long denied to her, in the line of advancement in Medical Science and Public Hygiene. In our belief, the final success of this important measure has been due, for the most part, to the earnest and honest labors of Dr. C. A. Lindsley of New Haven, and Dr. C. W. Chamberlain of Hartford. The acknowledgment of their services, in this report, is a very slight return for the service they have done the State and the Profession, still it has seemed becoming in us, as the Committee on Matters of Professional Interest in the State, to make such an acknowledgment, feeble as it is.

It is most earnestly to be hoped that the members of this Society are fully aware of the importance of the work to be performed by this State Board of Health, and that they will encourage and assist them in every way that lies in their power.

Your attention is particularly called to the numerous interesting

papers and cases, the notes of which have been sent in from the various counties. It shows plainly that there is a large amount of important and interesting material in our State, which, if properly harvested, would make our Volume of Proceedings what it should be, viz., a volume which would take its place among the first in the country, in the yearly history of the advancement of Medical Science.

Respectfully submitted,

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

Chairman Committee on

Matters of Professional Interest in the State.

REPORT ON VITAL STATISTICS.

C. W. Chamberlain, M.D., Hartford.

The study of vital statistics seems at first sight particularly dry and uninteresting, with its endless array of multifarious figures, averages, and tables. But upon closer investigation, these apparently dry abstractions become clothed with a living significance close linked with human life and destiny. The laws of life lie hidden here as Kepler's laws in the mass of details accumulated by patient watchers of the stars during the ages that preceded him, and only await the master-hand to evoke them out of the seeming chaos. Already truths of deep importance to the race have been gathered from this field, as our knowledge concerning the origin, rise, and spread of epidemics, and especially of cholera, and the power of control that results from that knowledge. Indeed all accurate knowledge concerning disease, its nature and treatment, must rest upon a statistical basis, and all advance in our knowledge concerning the treatment must rest upon this solid foundation.

The importance of accurate and complete registration therefore becomes apparent, and that can only be secured by a prompt observance of the details by each individual practitioner, and perhaps at times a friendly oversight over the work of the registrars. The need of some such work is seen in the large number of deaths reported as "cause unknown" or "not stated," nearly ten per cent. of the total mortality. If the physicians are negligent and derelict in such duties, how can we expect the public to support any measures

for securing better results? The number of deaths this year reported is slightly less than last; 2380 were of the class zymotic, divided as follows, principally:

Diphtheria 589, cholera infantum 447, typhoid fever 321, scarlet fever 216, croup 178, intermittent fever 37, typho-malarial 28. There has been a noticeable increase in deaths from ague: 37 against 11 last year, and 28 cases of typho-malarial are also reported, all but one in New Haven, which city gives the most complete registration report of any in the State. The number of deaths reported as from diphtheria increases steadily each year, mainly from the cities and villages, while typhoid fever causes the greater mortality proportionately in the country. Cerebro-spinal meningitis appears to have become an endemic in this State; 11 deaths were thus caused in 1877.

Consumption ranks *facile princeps* among the causes of death—the mortality scarcely varying from 1876, 1,301, exceeding the general average for the last ten years considerably. Pneumonia 490. From all diseases of the lungs, including phthisis, the mortality is 2,078, a little over twenty per cent. of the total mortality.

The three great items in the list are infantile, consumption and lung diseases, and zymotics—a large proportion preventable by a wise and easily practicable enforcement of sanitary regulations.

Among the class of violent deaths most are reported as resulting from accident, the nature of which is not stated, nor is the manner of suicide; the number of suicides is nearly doubled, 52 against 37 in 1876; 23 deaths are reported as from railroad injuries.

The number of homicides, 10, is notably increased.

Among more unusual causes, 8 are reported from hydrophobia, making 25 in all since 1848, and double the number in 1876. Three from freezing, two from privation, about the usual proportion. Malformations 25, stricture of œsophagus 1, rupture of gall-bladder 1.

An unusually large number of the very aged are reported five centenarians.

There has been no general epidemic, while locally contagious diseases, and especially diphtheria, have prevailed very extensively.

The following table shows the comparative mortality from croup, diphtheria, and scarlet fever:

	Diphtheria.	Croup.	Scarlet Fever.	Total.
1877,	589	178	216	983
1876,	564	221	171	956
1875,	361	165	183	709
1874,	158	113	240	511
1873,	161	162	370	693
1872,	157	212	406	775
1871,	78	110	263	451

The deaths might be thus classified: the first period from birth to ten years, which might be called that requiring support; the second from ten to twenty, which might be considered the self-supporting period; the third from twenty to seventy, the productive period; and the fourth from seventy upwards, non-productive or requiring support. These are somewhat arbitrary, and the precise limits selected with reference to the returns, which are mostly in decades:

1st Period.	2d.	3d.	4th.
3,706	529	3,623	1,653

Total number of deaths, deducting still births and age not stated, 9,033; about fifty per cent. of these are in the second and third periods; each death is a direct loss to the productive power of the State, and as a large percentage are due to preventable diseases, the value of hygienic measures to the State becomes mathematically demonstrable at least in one phase.

The writers on political economy say that "population is wealth," and if that be true then all measures that tend to decrease the death rate increase the prosperity of the State. The study of the causes of disease, as revealed by registration, show that it occurs irregularly, and coincides with certain conditions, and increases or decreases as these vary, and thus guides in prevention. The only disadvantage is that the contagion has already been pretty widely disseminated before its results appear in the death returns, and many mild cases happened before one fatal. The only way to obviate this is to have a prompt return of the appearance of infectious diseases in each locality, which will furnish a sure guide for means of prevention. This, it is hoped, may be accomplished in this State.

HARTFORD COUNTY.

Dr. W A. M. Wainwright, *Chairman*
of Committee on Matters of Professional Interest in the State:

Dear Sir,—I have the honor to present for your consideration a report made up from the material received in reply to the very interesting questions contained in your circular.

The year has been rich in health. Epidemics have been mild, if not limited. Miasmatic diseases of all forms,—intermittent, remittent, masked, and, in a few instances, pernicious,—have been slowly but steadily and stealthily creeping over nearly the entire county.

Typhoid fever has gradually receded at the approach of this malarial, lingering long enough, in some instances, to join forces with it in the production of the typho-malarial hermaphrodite.

This malarial, choking out the typhoid, like the stronger grasses the weaker, has been the constant observation of many generations and all countries.

When our microscopes, ere long, shall have discovered for us the "disease germs" of these two maladies, we shall, doubtless, find most cheering pastime in watching these lusty malarial pike mercilessly devouring these helpless typhoid minnows,—poor fellows!

Hooping-cough has whooped out its same old-time notes throughout the three hundred and sixty-five nights of the year, in almost every town in the county.

The canine irritability, noticed last year, has increased and developed into a canine rabies, out of which there have arisen, among our citizens, three or four cases of hydrophobia, terminating in death.

Like the progressive severity up to fatality of the effects of successive peritoneal inoculations from animal to animal, may there be a progressive severity of effects from the ordinary bite of an irritable dog, developed through successive bitten animals into final rabies?

Two or three respondents have been "able to trace the existing cause of zymotic diseases to bad sewerage, drainage, etc.," in all their cases; others few, in none of their cases; some in part of their cases.

Typhoid fever has "prevailed" to a less extent, and been milder in type, as reported by Drs. Gray in Bloomfield, Avery in Hartford, Shepherd in Collinsville, Wood in South Windsor, Rockwell in East Windsor, Warner in Wethersfield, Sanford in Tariffville, Strickland in Enfield, Wheeler in Farmington, Mather in Suffield, Swasey in New Britain, Edwards in Granby, Way in Bristol, Ensign in Poquonnock, Griswold in Rocky Hill; but by Mason of Suffield it was reported more fatal, if possibly less frequent. It is worthy of remark in connection with this statement of the undiminished severity of typhoid fever in a portion of Suffield, that Dr. Mason also reported entire exemptions from malarial maladies within his observation, which is the only locality in the county reported free from malarial diseases.

Malarial diseases, by the same respondents, are reported increasing, more or less rapidly, in all the above towns, with the exceptions of Hartford, Farmington, and Bristol, they being on the wane in these towns; and that part of Suffield which, according to Dr. Mason, has not yet been touched, and doubtful Granby, where according to Dr. Edwards, more frequent neuralgias may indicate the approach of the malarial influence.

In vaccination, bovine virus is used by all; preferred by nearly all; successful, case for case, in the experience of the majority; and in percentages varying from fifty to one hundred in the hands of the rest.

Dr. Wood, alone, reports a case of "serious trouble," arising from vaccination.

The important sixth question, to which the attention of the respondents was "particularly called," has elicited nine affirmative, and six negative replies, and one reply expressing doubt.

Drs. Rockwell and Storrs present interesting cases in point worthy of considerate attention.

Dr. Griswold's elaborate replies to the circular, is placed to your notice, entire.

Papers and cases, by yourself, the honored chairman, and by Drs. Mather, O'Flaherty, Lyon, Bacon, and others, accompany this report, which is respectfully submitted.

L. S. WILCOX,

Reporter for Hartford County.

A CASE OF ATROPHY OF THE HEART.

L. S. Wilcox, M.D., Hartford.

Mrs. S., twenty-eight years old, died July 25, 1877.

At the autopsy, next day, there were found extensive acute tuberculosis of the peritoneum; a free diffusion of miliary tubercles through the upper half of the left lung; its tissue still firm; a calculus, "obsolete tubercles," the size of a hazel nut, in the center of the right apex, the surrounding tissue firm; the liver in incipient fatty degeneration, probably tubercular; and the heart, the point of interest, of remarkable and marvelous atrophy; its entire weight falling so low as three and three-quarters ounces.

Mrs. S. was five feet and four inches in height, one hundred and ten pounds in weight, often a few pounds more, handsome in person, finely developed and moulded. She had always been in good but not robust health. She easily tired on ordinary exertion.

She married early, and early in married life gave birth to a three months' fœtus.

She quickly regained her strength, and from choice was not in gestation again until to give birth to a large, healthy child in August, 1874. This child is still in good health.

After this birth there was a little more weariness in her daily life. In the autumn of 1876 she encountered a useless and wicked mental shock. After a struggle with it for three months, she fell into a great prostration, hectic supervening; abdominal pains; no diarrhœa; no cough; ere long, constant nausea during the day for three months; good sleep at night; at last, death, through the avenue of a very light coma.

CASES, AND REMARKS UPON THE ORIGIN, OF TYPHOID FEVER.

M. Storrs, M.D., Hartford.

"Have you ever known a case of typhoid or scarlet fever, or diphtheria, to arise spontaneously (every possible source of transmission from some previous case having been eliminated)?"*

As an answer to this question, so far as it relates to typhoid fever, we would present the following cases which came under our own observation, and in which every possible source of transmission from some previous case was apparently eliminated. We have selected these cases from the rural districts because there we can oftener trace the fever to some definite source. In the large towns this is almost impossible, from

* Question from State Circular.

the many points or foci of infection which can disseminate their influence on every side by the many and various channels of intercommunication. Again, the country is the best place to observe this fever, because in later years it has been found there in greater frequency and severity. In cities, by the introduction of pure water, the abandonment of wells, the substitution of the sewer for the privy vault, typhoid fever has become milder and less frequent. This is the universal testimony.

CASES I. *Typhoid fever caused by decayed vegetables.*

In the month of August, in a house remote from neighbors, occurred simultaneously two well-marked cases of typhoid fever, a father and son. There had been no previous case in the vicinity. Both died, the son four days before the father, having hemorrhage of the bowels. There was no faulty sanitary condition outside of the house. Well and privy in good order. But in the house there was the smell of rotten potatoes. A large quantity of this vegetable was found in the cellar, where they had remained through the summer.

The cellar had had no ventilation except the occasional opening of the door into it from the middle of the house. Other members of the family escaped the fever, and there were no other cases in the neighborhood.

CASES II. *Typhoid fever from the gases of a kitchen cesspool.*

This was in October, after the very hot centennial summer. There were four well-marked cases of typhoid in the house at the same time. All recovered. The location was healthy. The well was distant, across the street from the house. The privy was a good distance in the rear of the house. There was no history of typhoid fever on the premises or in the vicinity. Inside of the house there was a bad odor coming from the kitchen sink. To avoid this a cork was inserted into the waste-pipe when the sink was not in use. We found that this waste-pipe, without trap, passed into a tile-drain which ended in a covered cesspool about eighty feet from the house. The contents of this cesspool, composed of the ordinary drainage from a kitchen sink, animal and vegetable material, were undergoing an active putrid decomposition. There was no possible communication between the cesspool and the well, or privy.

No human excrement could be concerned in the case.

CASE III. *Typhoid fever from a sink-drain discharging itself into the well.*

The patient, a man about forty-five years of age, had the usual symptoms and course of typhoid fever, ending in recovery. We were assured that the drain was in good condition, having been within a year or so overhauled. Detecting an odor and taste in the water, after much urging the drain was uncovered and found choked near the well by sink-grease and other material, and the contents of the drain were going into the well.

The privy was remote from the house.

Cases IV. *Typhoid fever from a cesspool common to the kitchen and water-closet.*

This house, also in the country, was first-class in every respect. Had all the modern conveniences of city houses. Special care had been taken to have the sanitary condition perfect. All the waste-pipes from the kitchen and water-closets passed into a common sewer which ended about one hundred feet from the house. This cesspool could be pumped out as required.

Two persons about the same time were taken down with typhoid fever in September of the centennial year. One died, the other had a severe sickness. The sewer was opened and found stopped near the cesspool, so that all the gases formed in the sewer had to escape through the trap into the house, as there was no sewer ventilation. Ten years before there had been a case of typhoid fever in this house, but at that time the water-closets were not in the house, an outside vault being used. Hence there was no possible way for any long-lived typhoid germ to find its way from one case to the other through the excrements. It should be stated that the patient who died had a few weeks before visited the centennial, and had not felt as well as usual from that time. The other person had remained in the house through the summer.

We might add to these other similar cases, and also cases where, if the cause was not so apparent, it was certain at least that there had been no preceding case of typhoid fever. In the cases now presented, we believe that every medical man must agree that the apparent causes were the real causes of the fevers, yet the strict contagionist and the believer in the typhoid propagation by continuous succession will not admit that these fevers were typhoid.

Dr. William Budd of Bristol, England, foremost of the contagionists twenty years ago rejected the spontaneous origin of typhoid fever. He placed it in the list of contagious diseases along with small-pox. He believed that the poison is reproduced and multiplied in the body of the patient, and that the exuviæ from the surface which is the seat of the eruption is cast off with the excrement and the poison is disseminated. He believes that the spontaneous origin of typhoid fever is as absurd as the spontaneous generation of plants and animals. Without any criticism or analysis of his views, suffice it to say that his argument falls to the ground if typhoid fever is not contagious. Liebermeister, who acknowledges Budd as the originator of his views, maintains that typhoid fever is not contagious. That the propagation by continuous succession is by the development of the typhoid germ in the typhoid excrement. He also rejects the spontaneous origin of the fever. But to what extent in the profession these original views of Budd or the modified views of Liebermeister have prevailed, we quote from Liebermeister himself: * "This opinion," says he, "that the poison of typhoid fever is propagated continuously,

* Ziemssen, Amer. Ed., Vol. I, p. 251.

and never originates autochthonously, was first established by Budd. It has gained ground as yet but slowly, but there is every prospect that it will in time become the prevalent opinion." And again, when the following questions are put: what is the origin of typhoid fever? how is the poison generated, and how is it communicated to man? he testifies to the prevailing opinion by saying: * "These questions are answered with great unanimity by most persons, even by those who believe in direct contagion. They hold that the poison of typhoid fever originates in the decomposition of organic substances. The name pythogenic fever proposed by Murchison is based on this generally received opinion."

Agreeing with this testimony of Liebermeister, we find pretty generally that the writers on this fever in England and France hold to the spontaneous theory. Trosseau, with the profession in that country, believes in the contagiousness to a limited extent, yet they are firm believers also in its spontaneity. Niemeyer believes in the miasmatic origin of typhoid fever, that germs may be spontaneously produced by the decomposition of organic matter. These germs may originate and increase not only in the bodies of patients and in their dejections, but outside of them also. These views differ from the exclusive excrement germ theory. In this country it is safe to say that the French and English opinions generally prevail; some adopt the germ theory.

Prof. Alonzo Clark is in doubt as to whether he would call the fever originating from the cesspool, typhoid or cesspool fever.

He says: † "Observations sufficiently extensive have not been made."

Prof. A. L. Loomis arrives at the following conclusions: ‡ "1. That its development is independent of over-crowding, and that it attacks the rich and poor indiscriminately. 2. That it may be communicated from one person to another through the excrements which have undergone decomposition after their discharge. 3. That an endemic of typhoid fever only occurs where the air or drinking water of the locality has become poisoned by emanations from typhoid excrements which have undergone decomposition, and that if the fever becomes epidemic, it is a circumscribed epidemic, and not wide-spread. 4. That the exact nature of the typhoid fever poison is still unknown."

Prof. Flint says § "that it generally originates spontaneously;" also, "that the alvine excreta are the media of communication in the rare instances in which the disease is evidently communicated, is highly probable, but the doctrine that this is universally the causation is inconsistent with facts which appear to show conclusively the spontaneous generation of the causative agent in the great majority of cases."

There is, therefore, the world over, on this point of causation, a great diversity of opinions put forth. This fact, together with the great

* Op. Cit., p. 49.
† Medical Record, Vol. 13, p. 262.
‡ Medical Record, Vol. 11, p. 650.
§ Flint's Practice of Medicine, 3d Ed., p. 826.

variety of names given to the fever that we call typhoid, also its diverse manifestations so great that Liebermeister says: "The *diseases* which are produced by the specific poison of typhoid fever differ a good deal among themselves; some of these diseases are so serious that life is almost inevitably destroyed by them; others are so trifling that patient and physician are left in doubt whether there were really any disease at all."* Now these facts—this diversity of opinion—of names and of the manifestations of the disease are suggestive of more than a simple origin—a specific cause—a contagium vivum.

We hear at the present day very little said in reference to the direct contagiousness of typhoid fever. As to indirect contagiousness much that is fanciful and imaginative will pass away. Such wild views as a certain celebrated teacher of medicine advanced to his pupils, that the scales of the epidermis in scarlet fever can be wafted on the wind from Australia to this country and cause scarlet fever, must give way to better judgment and more practical common-sense. We need not be at war with the germ theory, but only give it its proper place. It is a mere hypothesis which fails to cover the facts of observation.

Liebermeister—we refer to him the more freely since he is just now a standard-bearer—objects to the decomposition of organic matter as the cause of typhoid fever, on this ground: "To explain," he says, "the origin of typhoid fever by a general and indefinite assumption of a decomposition of organic substances is not *satisfactory*. It is not every kind of decomposition that can produce typhoid fever; it *must be* some specific form of decomposition which elaborates as a specific product the poison of that disease."† It is more *satisfactory* in any investigation to know definitely the first cause. It is the first step in true philosophy. But it is far from satisfactory, neither is it good philosophy to assume as true what ought to be reached by a process of induction. He makes a specific form of decomposition to elaborate a specific poison, and the only ground for the assumption is that it *must* be so. Again he says, "that typhoid fever has never been produced by experiments with decomposing substances nor by products of decomposition accidentally introduced into the body."‡ Now what are the cases that we have related but experiments in this very direction, attended with direct results that must outweigh any mere theory?

To account for sporadic cases occurring at long intervals of time, he endows his imaginary germs with a long-lived nature. We selected the above cases of typhoid fever where the elimination of the excrement germ was possible for an indefinitely long period. We have been drawn into this lengthy discussion not only from the great theoretical interest inherent in it, but also from the practical consequences involved. If the germ theory is true, the prevention and the banishment altogether of typhoid fever only demands that a proper disposition of the excreta

* Op. Cit., Vol. 1, p. 76. † Ziemssen, Vol. 1, p. 49. ‡ Op. Cit., p. 49.

of the typhoid patient should be made. If typhoid fever has a spontaneous origin, then eternal vigilance, a warfare with filth and all impurities, and a fostering of all sanitary science and art.

In conclusion, we wish only to say that the above fevers in all their clinical features were like the typical typhoid. If they were not typhoid then we have no way of determining a true case of typhoid unless we can fix the parentage.

HYDROPHOBIA.

JOHN O'FLAHERTY, M.D., HARTFORD.

Thursday morning, June 28th, about 9 o'clock, I was summoned to attend Annie G——, aged four years and eight months, residing in this city. As I entered the room she was seated on her mother's lap. I was struck with her peculiar respiration, and with the singular appearance of her countenance, particularly the wild and staring aspect of her eyes. I learned from the mother that five weeks previous she had been bitten by a dog below the right eye, and on examination I found what seemed to me a well-marked cicatrix, about one-fourth of an inch long and one-half an inch below the eye. The outer end of the cicatrix appeared to be on a line with the outer angle of the eye. There was no swelling, redness, or abnormal appearance of the cicatrix. The dog was an ordinary cur which had given birth, and was at the time suckling her young. She was quite irritable and peevish, and had, a few days before, bitten other children, including a brother to this child Annie.

The wound bled profusely, and it was estimated that at least the child lost half a pint of blood. The dog was shot in the afternoon to prevent her from doing further injury. The wound healed kindly without medical assistance, and all thoughts of the matter were forgotten in a few days. The particulars of the biting are these: This child, with others, was playing in the yard, when the dog came along. Annie took hold of the dog's tail, whereupon she turned and bit her as before stated. No further attention was given the case, and the child went on in her ordinary state of health until Monday about noon, June 25th—thirty-five days after having been bitten—when, while playing in the yard with other children, she became alarmed at the sight of a dog, and rushed into the house in a very excited condition, screaming—"The dog, mother, the dog!" After considerable time the mother succeeded in calming her, and she remained in the house all the afternoon, apparently not well. That night—Monday night—she slept but little; was restless, turning in bed and kicking all night. Tuesday morning she seemed very sick. She ate for breakfast a very little bread and tea; for dinner, nothing; remained in the house all day, going from room to room in a very nerv-

ous and agitated state; asked for water frequently, but when given would not drink, saying it hurt her to swallow it. For supper she had a few teaspoonsful of gruel. Tuesday night she slept none; would doze a few moments apparently asleep, then start up in a wild and delirious condition about a dog. Wednesday A. M. would eat nothing for breakfast, and the whole day went without food or nourishment of any kind; was worse than on the previous day, and when asked where she felt sick would point toward the pit of her stomach. Wednesday night, the mother says, was a horrible night. No rest for the little sufferer anywhere; constant twitchings of the arms and legs, and jumping from one end of the bed to the other, and continued so through the morning until I saw her about nine o'clock.

As stated before, her eyes had the most singular appearance I ever witnessed. There was considerable dilatation of the pupils, with an injected appearance of the whole eye; a peculiar prominent and protruding aspect of the organ, particularly the globe of the eye, with its wild, staring, and stupid expression. The aspect of the face was indicative of intense physical suffering, with the appearance as if the chin were drawn inward and downward. There was considerable heat about the head; the temperature of the hands seemed not high; the feet and legs, as far as the knees, were somewhat cooler than the hands; although having my thermometer with me, I did not take the temperature owing to her extreme restless condition. The tongue was coated and moist, similar to what is usually called a bilious tongue; there seemed to be great difficulty in protruding it, and the appearance of the tip of the organ was very unusual, being thickened and drawn backwards, with a great dislike on the part of the child to protrude it, owing probably to its stiffened condition. On examination of the throat there was no uncommon redness or other unnatural appearance of the parts; but the examination had the effect of throwing her into a severe clonic convulsion. She had an evacuation of the bowels on Monday afternoon; none on Tuesday; Wednesday a dose of castor-oil was given her, a very small quantity of which was swallowed. A loud gurgling noise as if the bowels were filled with gases or wind, and was passing rapidly from one part of the intestines to another, could be distinctly heard in the next room. From the beginning she passed but little water, which would be expected, as she drank but little.

The pulse at this time was from 140 to 150 beats to the minute, and quite feeble. She spoke but little; articulation rather indistinct. When asked if she wanted water she nodded her head; I had some brought me, and when giving her a teaspoonful she leaned the head forward in a quick and nervous manner, and as the spoon approached her mouth she dashed it to the floor with both hands, and went into a severe clonic convulsion, working furiously with arms and legs in a manner that was painful to look at. The mother now held her arms while I gave her a teaspoonful of water, and as it approached her mouth there was

a quiek tremulous action of the head, with a quivering motion of the lips and ehin. She swallowed a portion of it, the rest of which she spurted out, when she went into a severe spasm, working as in the last paroxysm, with the ehin firmly fixed and the head drawn baekwards. This was repeated a few times with the effeet of throwing her into severe spasms on eaeh oeeasion. Several teaspoonsful of milk were now given her, which she swallowed with much greater ease. The reception of each teaspoonful of milk seemed to be the signal for a severe laryngeal spasm, but there seemed to be no spasmodic action of the arms or legs. Each attempt at swallowing water gave rise to a severe clonie general convulsion, while the swallowing of milk only brought on the laryngeal spasms. It was only after long and urgent coaxing that she could be induced to take the second teaspoonful of water, whereas she would take several teaspoonsful of milk without solicitation, and at one time took a teaspoon in her own hand and drank nearly a mugfull without being influeuced by any one. I went into the next room and allowed water to pour into a basin, she watching me closely all the time, but it had no effect on her. I next opened a door, allowing a current of air to reach her, which had the effect of throwing her into one of the very worst spasms that I witnessed. As I sat near with her face in the opposite direction from me, I blew into the side of her face and she went immediately into a severe spasm. When the window blinds in front of her were thrown open she became very much agitated, and would finally work herself into a spasm. Even when a fly would rest on her skin it had the effect of throwing her into a spasm. I asked her several times where she felt sick, and she would invariably place her hand on the epigastrium. When asked if she had pain in the back or anywhere along the spine, she made no reply, but pointed towards the epigastric region. The respirations were of a hurried, gasping nature, and every fifteen or twenty seconds a long, deep sighing respiration would take place. But during the spasms the breathing was very irregular, and extremely rapid. She had four spasms at one time in rapid succession, and after a few moments' rest had two more severe ones.

At one time she grasped the right hand in the left, and seemed to be squeezing it with all her strength. During one of her spasms she worked herself away from her mother, went and laid on the lounge for a few moments with an inclination to doze, after which she jumped up, working in a severe convulsion, at the expiration of which she made a violent effort to tear off her night-dress, grasping hold of it with both hands around the neck, and when the mother prevented her she turned upon her in a furious state of excitement, and made a most desperate effort to tear the mother's face, and did, in fact, draw some blood from her left cheek. For some time she seemed to be in a perfect state of maniacal excitement, tearing everything within reach of her, and making several attempts to strike me and the mother, screaming in a perfect

state of frenzy, during which she escaped to the other end of the room, where she lay on the floor, and after a few moments became quiet.

It was now about ten o'clock, and I left the house after having remained there about an hour. I returned at 11.30 and found her much worse; the pulse was so rapid and feeble that it could not be counted. The hands and feet were quite cool, and the skin began to grow livid, particularly the legs as far as the knees. She swallowed a few teaspoonsful of water with some difficulty, after which some milk was given her, which she took with greater ease. In a few moments she began to vomit a thin, glairy, frothy matter, which continued to ooze from her mouth. More milk was now given her, which she seemed to relish and swallow with apparently greater ease than at my first visit in the morning. The vomiting immediately returned, consisting of the same slimy, frothy matter mentioned above, which kept dropping on the floor for some time. It seemed to ooze or flow out of her mouth without any effort on her part to eject it, coming out in large glairy bubbles in rapid succession. A dose of hydrate of chloral was now administered to her, which had the effect of producing a few naps of twenty or thirty minutes of quiet sleep, the first she had had since Monday night.

At two o'clock she was again visited, at which time there were present Drs. Wilcox, Storrs, Fuller, Lyon, Warner, Bromley, and Knight. Some milk and water was given her, which she drank with less difficulty than at the last visit. She was extremely agitated and restless, and presented the appearance of one who could live but a few hours. Some gentleman made the remark that she presented the appearance of one suffering from some terrible blood-poisoning. It was suggested by some one of the medical gentlemen that it would be well to give her a stimulant, and before leaving the house some whiskey and another dose of chloral was ordered to be given her.

At 4.30 Dr. George F. Hawley saw her with me. She was then seated on her mother's lap engaged in eating a sugar-cake steeped in warm tea. She would steep the cake in the tea, then take a mouthful of it and make an attempt to swallow, which she did in a hurried and spasmodic manner. All her movements were of a quick, nervous, tremulous, paralytic character, with twitchings of all or nearly all the muscles of the body. As the arm would approach the mouth there was an irregular, nervous, agitated motion of the hand. The hands and feet were quite cold, and livid in appearance, with the same wild, staring, and stupid expression of the eyes as mentioned above. A few teaspoonsful of water was put into a tin mug and handed to her; she was coaxed to drink it, but in her efforts to bring it to the mouth, spilled it. After some more water was put in the mug she was induced to drink it, which she attempted to do, and the reception of a part of the water in the mouth threw her into a severe clonic convulsion. It was painful to behold the spasmodic action of the arms and legs, with head and shoulders drawn

backwards, teeth set, chin raised, and in fact we thought she would die in the paroxysm.

It was now about a quarter of five and we left the house. Her mother laid her on the lounge, where she remained, apparently asleep, a few moments, and about five o'clock she jumped up, went into a severe convulsion, and dropped dead on the floor during the fit. She lived but eight hours from the time of my first visit in the morning. From the first manifestation of the disease at noon Monday to the hour of death, she lived three days and five hours; and from the date of the biting on the 21st of May to the 28th of June, at 5 P. M., she lived thirty-nine days and five hours. A postmortem could not be obtained.

POPLITEAL ANEURISM CURED BY ABSOLUTE COMPRESSION OF THE FEMORAL ARTERY.

W. A. M. Wainwright, M.D., Hartford.

T. W. S. was admitted to the Hartford Hospital, July 13, 1877. He was born in New Jersey, and is a stone-cutter by trade. He is 27 years of age, healthy and robust in appearance, and of unusual muscular development. His habits have been irregular and somewhat intemperate. He says that he has had syphilis, and was under treatment for secondary in a New York Dispensary about two years ago. He states that on the 20th of June last he worked very hard in a distillery, helping to move seven hundred (700) barrels of gin. At night he began to feel pain in the right knee. It became stiff and painful on motion, and in a day or two he noticed a slight swelling under the knee. This swelling slowly increased in size; the pain and stiffness continued, and just before admission to hospital he became unable to work at his trade of stone-cutting, at which he had been engaged since the 1st of July.

Upon examination the patient is found to have a well-marked, circumscribed aneurism about the size of a large egg, situated in, and well filling up, the right popliteal space. Pulsation and bruit both very distinct. The right knee measures sixteen and one-half (16½) inches in circumference, being one and one-half (1½) inches greater than the left. The right leg is swollen, hard, and tense. His general condition is good.

Treatment.

A consultation being held, it was decided to apply absolute compression to the femoral artery, by means of the Signoroni (commonly called the Horse-shoe) tourniquet. It was suggested that in addition to the tourniquet, an Esmarch's bandage be applied to the leg. This was objected to on the ground that the compression of the bandage might injure the tissues from which the blood supply was to be cut off, and also

that, to say the least, it would not favor the formation of a clot in the aneurismal sac, on account of the compression exerted upon it.

July 17, 1877, the patient was placed in bed, with the leg, which had been carefully enveloped in cotton-wool, bandaged upon a single inclined plane. A Signaroni tourniquet was then applied to the femoral artery in the lower portion of Scarpa's space.

In order to protect the tissues as far as possible from pressure, a large towel, folded square, was placed between the lower plate of the tourniquet and the skin; and a compress of lint was placed under the button. The tourniquet was then tightened until all pulsation in the aneurism was stopped. The patient at first declined to take an anæsthetic, thinking that he would be able to endure the pain. He did so for twenty minutes, when he gave up, the pain having become intolerable. Chloroform was then administered. This was used instead of ether,—first, on account of its more rapid effect; and, second, in order to avoid the struggling of the patient, which is so common under the use of the latter.

The compression was kept up precisely two hours, the patient having been kept under the influence of the anæsthetic. The tourniquet was then carefully loosened, and no pulsation being felt in the tumor, was removed. As a matter of prudence the patient was kept in bed for a week. The foot and leg soon regained their normal temperature, and the cotton-wool and inclined plane were removed after a day or two. The tissues of the thigh did not suffer the least injury, were not bruised, and the day after the operation showed no signs of the pressure of the tourniquet. Some trouble from that source was feared, as the patient's thigh was very large and muscular, and a very considerable amount of force was brought to bear in tightening the tourniquet.

The size of the knee was found to be one-half inch less than at the first measurement. At the end of the week the patient was allowed to get up and begin to take moderate exercise. After a few days, no pulsation returning in the tumor, all restrictions were taken off. The leg continued somewhat swollen and painful, and he was ordered to wear a bandage, and to continue its use for a long time. He was discharged from the hospital, August 17, 1877, at which date, although he could not use the leg as well as before the aneurism appeared, the inconvenience was very slight. He was seen some months after the operation; some swelling still remained in the leg, but he was able to work at his trade without inconvenience.

Remarks.—The treatment of aneurism by absolute compression, although by no means a new method, has not, I think, been many times attempted in this country. For the literature of the subject I would refer to the chapter on aneurism, in the last edition of Gross's System of Surgery. I will, however, quote a few of his words: "Within the past few years the old method of treatment of aneurism by forced, or steady,

persistent compression has, with some modification, been revived, and is likely in a great degree, if not entirely, to supersede the gradual method, upon which, until recently, so much stress was laid."

He then relates cases treated by Dr. William Murray of Newcastle-on-Tyne, England (to whom he gives the credit of recalling attention to this method), Dr. Mapother of Dublin, Mr. Heath and Mr. Tait of London, and says: "The practice pursued in these cases, it seems to me, is worthy of general adoption, as it usually requires only a very short time to effect a cure, and is unattended with suffering." During the past year there have been reported in England five cases of popliteal aneurism treated by the use of Esmarch's bandage alone. Three of them were successful, two were unsuccessful. In one of the successful cases reported by Dr. Walter Reid at the Royal Naval Hospital, Plymouth, the cure was effected in fifty minutes. Very recently three or four additional cases of failure in the hands of some of the London surgeons have been reported. For the reasons mentioned before, it does not seem to me that the use of Esmarch's bandage for the cure of such cases is to be commended. In the Signoroni tourniquet we have an instrument which is very easily managed, and one which, I think, answers every indication. The treatment of popliteal aneurism by absolute compression is to be commended for the following reasons; and, in my judgment, should always be used before the knife:

1. Its safety; for if it fails it can do no harm.
2. The short time in which the cure is accomplished, if it is successful.
3. Being done under the use of an anæsthetic, the patient is relieved from all pain, which accompanies, to a greater or less degree, all other methods of treatment by compression. It may, of course, fail in some cases, but that is also true of every other method of treatment.

CARDIAC THROMBOSIS.

Irving W. Lyon, M.D., Hartford.

Thrombosis of the right cavities of the heart and of the pulmonary artery being one of the well ascertained causes of sudden death in certain diseases and states attended with a hyperinotic state of the blood, it has been thought that the relation of the two following cases would prove interesting:

Case 1.—*Cardiac Thrombosis. Death Twenty Minutes after Delivery.*

Mrs. R. J. R., aged 28½ years, of delicate build and constitution, was taken in labor with her third child at 1 P. M. April 20, 1876. The pains did not become severe till 4 P. M. I was called to her at 6 P. M.; found

her very comfortable, os beginning to dilate. Next saw her at 8.30 P. M.; the pains had become harder and with them she was straining and pulling lustily upon a sheet attached to the foot of the bed, as though well advanced in the second stage. I examined and found the os but little dilated, and directed a discontinuance of the pulliug. At 1 A. M. the os was dilated to about two inches, but would relax, instead of becoming tense with each pain. For this irregular contraction I administered chloroform moderately. At 1.30, while gently under its influence, grunting with each pain, she began to shiver as from cold; the entire body quivered, the lips vibrated, and the bed trembled, the forearms were flexed upon the arms, and were rigidly held so; this chill lasted full ten, perhaps fifteen minutes. I was alarmed at first, but as full consciousness returned in about five minutes after the chill began, I felt that no accident had occurred from the chloroform. She said that she did not feel cold. A few moments after the chill the pulse was normal and the pains recurred regularly. She begged me to resume the chloroform, but this I resolved not to do. About 2 o'clock complained of nausea, and at 4.30 A. M. vomited, and the vomited matter contained a trace of blood. All this time the patient kept up a constant begging and crying for the chloroform. The pains were apparently good, but the labor did not progress. Rising at 5 A. M. from a nap, I went to her bedside, and was struck at finding the lips, tongue, and buccal cavity covered with blood, which was dark and viscid. The attendants then informed me that she had vomited half an hour previously, and showed me the vomited matter, tinged with blood as above described. I found her pulse 144 and very weak, and the axillary temperature 101½°. The respiration was not noted, but I recollect that it was not notably disturbed, and in this I am sustained by the attendants. She had no pain anywhere save the uterine pains, and I was at a loss to account for this great and untoward change. The os was more dilated, and delivery with the forceps was now easy of accomplishment. At this juncture I stated to her husband her critical condition, and he was at once dispatched for Dr. M. Storrs, who arrived at 6.30 A. M. In the meantime she had had several good pains, and the pulse had improved, so that now it rated 120 and was somewhat stronger. She refused to take tea or stimulants. Dr. Storrs administered Squibb's ether, and I applied the forceps and easily delivered her of a dead fœtus. The womb was not left one moment and was constantly well contracted; the placenta was easily delivered. Consciousness returned in about five minutes after delivery, and the patient expressed the greatest happiness that the labor was ended, and said that she felt perfectly easy, which was further indicated by a smiling and placid countenance. I constantly watched the uterus, which remained well contracted, but the pulse was exceedingly feeble and fast. Ten minutes had hardly elapsed after the delivery, or five minutes after she had first spoken, before the countenance assumed

a cyanotic hue, the pulse grew weaker, soon becoming imperceptible, the patient gasped for breath, throwing her head and arms about the bed, said in answer to inquiries that she felt distressed in the region of the epigastrium, failed rapidly and died in about ten minutes after the beginning of these symptoms, and twenty minutes after the delivery. There was little hemorrhage during the delivery, and none afterward. About three weeks before her labor I examined her urine and it was free from albumen or casts. At 5 A. M., when the alarming symptoms were first observed, I carefully auscultated the heart and could hear nothing abnormal. An examination, *post mortem*, of the body could not be obtained.

NOTE.—I reported this case to the Hartford City Medical Society as one of Cardiac Thrombosis, the coagulum possibly extending into the pulmonary artery. I subsequently carried the notes of the case to New York, and read them to Prof. E. G. Janeway, and to Dr. W. R. Gillette, both of whom pronounced it to be a case of Cardiac Thrombosis.

CASE 2.—*Cardiac Thrombosis during Convalescence from Pneumonia. Death thirty hours afterward.*

I was called November 29, 1877, to Dennis McA—, a native of Ireland, aged 26½ years, of slender physique; hight, five feet eleven inches; weight, 140 pounds; occupation, clerk. One brother and one sister had died of consumption, and another brother was then in the third stage of this disease. The patient himself had been subject to coughs, but at the time of the present attack was in good health.

I found him with pneumonia affecting the lower and middle lobes of the right lung, there being dullness on percussion, bronchial breathing and bronchophony over these parts. There was little or no cough and no expectoration, pulse 106, respiration 30, temperature (11.30 A. M.) 102⅔° in axilla. He had been seized with a chill on the 25th, and had taken to his bed on the 26th. There was nothing noteworthy in the progress of the case except that he was very weak, with feeble pulse, requiring the free use of quinine and stimulants. There was absence of cough and expectoration throughout the disease. December 8th he was convalescent. I saw him next December 11th; the lung was clearing and he was steadily gaining ground.

I next visited him December 15th; resolution was about completed. The patient had commenced to sit up out of bed on the 14th, and was sitting up at the time of my visit. He was in excellent spirits, with improving appetite and pulse. December 16th, sat up two hours just before dinner, ate his dinner, and then undressed and went to bed, feeling well as usual. About 4.30 P. M. his father came in and told him that some friends were coming in soon to see him; upon hearing this he arose in bed, sat upon its edge, and called for his clothes to dress. His mother advised him to remain in bed and did not get his clothes, whereupon he asked his father for them, and his father handed them to

him. He dressed and stepped into the room adjoining and seated himself in a rocker. Just at this moment he was suddenly seized with extreme dyspnœa and prostration, and was carried and placed upon the bed. I saw him at 8.45 P. M. The pulse was 146 per minute and feeble, respiration 38 and labored; the nails and integument of the face were cyanotic, the countenance expressive of great anxiety and discomfort. The attitude which the patient constantly kept was upon the left side inclined well over upon the face. I carefully examined the heart, but could hear no murmur; the lungs were perfectly clear. The patient remained in this condition, gradually growing weaker till he died at 10.45 P. M. the next day, December 17th, 30 hours after the seizure.

No *post mortem* examination could be obtained.

HYPERTROPHY OF THE SPLEEN.

Irving W. Lyon, M.D., Hartford.

Case I.—James M., aged 35, native of Ireland, height 5 feet 5 inches, weight 135 lbs., a laborer on railroad, consulted me at office, January 19, 1878. Said that he had been sick since the 1st of October last (three and a half months); had been well up to that time; had lived in Hartford six years, the past two years at 54 Avon street, in a very malarial section of the city. The history given was that of malarial disease, of no distinct type, though well-marked exacerbations were described, with chills, fever, and sweating; had vomited very frequently. He called my attention to a tumor within the abdomen, which he had first noticed about three weeks before. I examined it carefully. The tumor extended from the left hypochondrium downward to about one-half inch below the level of the umbilicus, and to the right somewhat beyond the mesial line. It did not reach above beyond the normal limits of the spleen, viz., the ninth rib on the anterior axiliary line. Its anterior surface was bulged. The general shape of the mass was quadrilateral rather than oblong, differing in this respect from the usual outlines of an enlarged spleen. Notwithstanding this I diagnosticated an enlarged spleen probably due to malarial congestion, and prescribed quinine. He immediately improved in health and strength, the vomiting ceased, and after a week resumed his work, and has not lost a day since. The patient is present, and the members of the Society are invited to examine him. You will notice that his lips are ruddy, and that the color of his skin is healthy; he eats and sleeps well, and feels well, though the spleen has undergone no diminution in size.

I omitted to state that his urine is healthy, and the stools normal in amount, color, and consistency.

Case II.—Mrs. James D., aged 22½ years, married three years; has

had three children; the first died a few minutes after birth; the second, aged one month, of broncho-pneumonia; the third is now, April 19, 1878, three months old. She first consulted me January 22, 1877, at office. Was then very pale, and had had a cough and sweats four months, and a diarrhœa two years. I examined lungs carefully, and found them healthy; prescribed bismuth and opium for the diarrhœa. Did not see her again till April 17, 1878. Has now a babe three months old; the patient is exceedingly weak and anæmic; has cough and expectoration in the morning; has eight to ten stools daily. She has had a tertian intermittent for the past three weeks, having skipped, during this time, but one paroxysm. I examined the lungs and could find no disease. I now examined the abdomen for the first time, and found a tumor reaching from near the left axilla to the level of the umbilicus, and to the right nearly to the mesial line. Its vertical diameter, by careful measurement, was somewhat more than nine inches. It was tender at its lower part. Careful inquiry was now made as to the length of time she had suffered from malaria, with the following results:

She was born and had lived in Plainfield, Conn., up to her marriage three years ago. She then came to Hartford, and had since lived near the corner of Windsor and Avon streets, a region where chills and fever are very prevalent. She began to have diarrhœa soon after coming to Hartford, and has had it ever since. Has not felt well since she came to Hartford, but before the present attack had had no chills and fever till September, 1877, when she was sick with them a week. A physician was called, and she had no more chills till the present time, as above related.

These facts, together with the absence of glandular enlargements in other parts of the body, and that the microscope shows no increase of leucocytes in the blood, render it very positive that this is a case of hypertrophied spleen from malarial congestion.

I should state that under the use of the sulphate of cinchonidia, which was prescribed on the 17th inst., she has much improved. She has had but one chill since, and that on the same day the medicine was commenced.

The diarrhœa, which amounted to eight and ten stools per diem, has notably decreased under a week's use of the cinchonidia.

THROMBOSIS OF THE FEMORAL AND POPLITEAL VEINS IN ADVANCED PHTHISIS. DEATH FROM EMBOLISM OF PULMONARY ARTERY, WITH PNEUMOTHORAX.

By Irving W. Lyon, M.D., Hartford.

Mr. M. K., aged 34, had had extensive consolidation of the right lung for over a year, and for six months, cavities. The left upper lobe had also become involved. He had emaciated almost to a skeleton.

Sunday, December 3, 1876, complained of pain in the left leg and thigh. I found tenderness along the popliteal and femoral veins, with cording of the latter at the groin. I diagnosticated thrombosis of these veins, enveloped the limb, which was moderately swollen, in flannels wrung out of hot water, and covered these with rubber cloth.

On Saturday morning, December 9th, I found him dressed and upon the lounge; the pain and lameness had almost disappeared, and he showed me how well he could bend the knee. At 3 P. M. I was sent for in great haste; found him sitting in a chair laboring with the most extreme dyspnœa; pulse 150, regular, and not notably weaker than usual; had no pain. These symptoms had commenced suddenly at about 2 o'clock while he was sitting quietly in his easy chair. I thought at once of two things, either of which would explain the symptoms, viz., pneumothorax and cardiac thrombosis. Only a very imperfect examination of the chest could be made, and this discovered exaggerated resonance and weak respiratory sounds over the lower portions of the left lung; but, as already stated, there was no pain. A fatal prognosis was made to the friends. In a short time he became much easier. I did not again see him alive. At 9 P. M. he had another paroxysm, which left more dyspnœa behind when it subsided than the first. At 1.30 A. M. he was seized again, and died half an hour after.

Permission to make a partial examination of the body was with difficulty obtained. This was done twelve hours after death, Dr. C. W. Chamberlain present and assisting. We first examined the left pleural cavity with reference to pneumothorax. A small opening, made in the lateral region, through the sixth intercostal space, caused air to escape with a sharp and prolonged blowing sound. The lower lobe of the lung was perfectly collapsed, the upper solidified by disease. Only about an ounce of clear serum was found in the pleural sac. The right lung was everywhere adherent, solidified, and filled with cavities. The venæ cavæ, right auricle and ventricle were moderately filled with dark clotted blood; in addition the right auricle contained a thick, fleshy coagulum, nearly white, and about two inches in length, and the inferior vena cava a long and slender clot of the same color and consistence. The pulmonary artery was examined and found to contain a mass which somewhat resembled a bundle of angle-worms. It appeared to consist of a slender, white fibrinous clot coiled upon itself and mixed with dark jelly-like coagula, the whole filling the caliber of the vessel and lying close up to its bifurcation, about one and a half to two inches from the pulmonary valves. The heart was rather small, but was otherwise healthy. No other parts of the body were examined.

The coagula from the pulmonary artery, right auricle and inferior vena cava, together with full notes of the case, were sent to Professor Janeway. We did not uncoil or in any way disturb the pulmonary mass, our object being to have Dr. Janeway see it as we found it.

He reported. First, that we undoubtedly had pneumothorax in the

case. Second, that the clots in the right auricle and inferior vena cava were *post-mortem* formations. Third, that the mass from the pulmonary artery, when unraveled, proved to be a lengthened clot with branches, which indicated that it had been formed somewhere in a vessel supplied with branches.

After corresponding with us and receiving from us the most positive assurances that we had not pulled this clot from the branches of the pulmonary artery, Dr. Janeway concluded that it had come from the left femoral and popliteal veins and their branches, where it had been formed during the thrombosis of these vessels above described. He added: "The only objection that I can consider, is that I never met with so large a clot moved in this way—yet, as I have said, it is the only tenable view of the case that one can take."

TREATMENT OF PHLYCTENULAR OPHTHALMIA BY STIMULATION.

W. T. Bacon, M.D., Hartford.

By the term Phlyctenular Ophthalmia, are included all forms of herpetic vesicles, whether on the cornea or conjunctiva. This is one of the most common of eye diseases, especially in children, and is distinguished by its chronicity and tendency to relapse. So common is it that out of 1,957 eye cases treated in the Toronto Infirmary, 315, or 16 per cent., were of this nature, and in the report of 1875 of the New York Infirmary, out of 3,924 cases of inflammation of the conjunctiva and cornea, we found 514 recorded as phlyctenular. The symptoms of the disease, in brief, are photophobia, conjunctival injection, lachrymation, more or less pain, and on inspection, one or more vesicles either on the cornea or conjunctiva. These vesicles generally ulcerate, then heal, leaving a small opaque spot, to be followed by another crop of the same, thus running their course for weeks or months, and wearing out the patience of doctor and patients. This disease is essentially asthenic in character, very apt to occur in persons of strumous constitutions, particularly when exposed to bad hygienic conditions. The ordinary treatment for this affection is the use of atropine from 2-4 gr. to ℥ i dropped into the eye, and hot water applied by means of cloths to the eye, three times a day, with now and then a canthoplasty in very chronic cases. Calomel is sometimes dusted into the eye.

During the winter of '76, while assistant-surgeon in the New York Eye and Ear Infirmary, these phlyctenular troubles, as treated above, were a constant source of annoyance on account of their chronicity, and the number of relapses, until Dr. Callan of that city proposed that I should try a stimulating form of treatment. The treatment proposed was an

ointment of the yellow oxide of mercury of gr. x-3i glycerine of starch to be used every other day, or gr. v-3i to be used every day. The red oxide may be substituted for the yellow, and vaseline for the glycerine of starch. The yellow oxide is preferable, however, because less irritating. The ointment is applied to the eyes on the end of a match, or camel's-hair brush, either by turning up the upper lid or depressing the lower, depositing it on the lid chosen, then carefully rubbing the closed lids with the finger so as to distribute the ointment equally over the eyeball. It is sometimes better in the beginning of an attack, when the congestion and photophobia are very great, to use atropine for a day or two before applying the ointment. We have never seen this application do any harm to the eyeball itself, but it may cause an eschar on the lid if the rubbing is not carefully performed, and a considerable portion remains in one spot on the lids. I am well aware that the use of both the red and yellow oxide is not new in eye therapeutics, but it is the strength of the preparation to which I wish to call your attention. Twenty years ago McKenzie recommended a powder of red oxide and sugar, one part to eight, to be blown into the eye; and ten years ago Pagenstecher introduced a salve of the yellow oxide in the same proportion. After using the ointment as recommended by Dr. Callan, in the proportion of from 1-6 to 1-4 for several months, with careful notes of some twenty-five cases, we came to the following conclusion, that we had almost a specific for this class of diseases on account of the certainty of cure, diminished number of relapses, alleviation of the intolerance of light, and the avoidance of surgical operations. We also found the ointment to be of great value in clearing up old opacities of the cornea, and indolent ulcers of the same; but to be used in these cases with more care. The following cases are an average of the twenty-five of which notes were taken: A. C. came to infirmary Oct. 15, with phlyctenular keratitis; Oct. 18, commenced use of ointment gr. x-3i every other day; Oct. 20, hyperæmia partially disappeared, and less photophobia; Oct. 27, patient cured; Nov 8, patient returned with a slight relapse; Nov. 12, cured. W. H. This patient had been suffering from keratitis since last May; Oct. 18, the use of the ointment gr. x-3i commenced; Oct. 20, marked improvement; Oct. 25, patient cured. J. C., age five. Since last August has been suffering from phlyctenular keratitis; Oct. 18, ointment used; Nov. 3, congestion all gone, and the opacity nearly disappeared; Nov. 12, patient returned with a relapse, eye greatly congested, photophobia marked, same treatment; Nov. 15, eye improved; Nov. 19, discharged cured. L. R. Phlyctenular Conjunctivitis; eye had been sore for three weeks; phlyctenular on the conjunctiva, inner side of the cornea with conjunctival injection of that side; Oct. 29, use of the ointment commenced; Nov. 13, patient returned cured. Mrs. C. W., age fifty, Feb. 15, 1877. This lady had in the winter of '76, phlyctenular conjunctivitis, for which she was treated with atropine and hot water, and afterwards by calomel dusted into the eye. At that time the attack lasted several

months, with one or two relapses. On examination the right eye presented one vesicle on the outer side of the cornea in the conjunctiva, with a fan-shape congestion, slight photophobia. Prescribed the yellow oxide gr. v, glycerine of starch 3i, to be used every day. Feb. 19, reported cured, and up to the present time has had no relapse. In February, 1878, a little girl of about four came under my charge, suffering with phlyctenular keratitis of six weeks' standing; photophobia and conjunctival congestion was considerable. She was put on the following treatment: Atropine gr. ii-℥i three times a day, warm water for ten minutes three times a day, and half a teaspoonful of cod liver oil containing three drops of syrup of iodide of iron. Under this treatment she improved slightly, but did not recover. After seeing her a few times the ointment gr. x-3i was used and recovery took place in about a week; it was not permanent, however, as a relapse soon occurred. The mother was then given ointment gr. v-3i with directions to use it every day. She was afraid to put it into the eye, so preferred to have me see the child daily. A few applications of the yellow oxide gr. x-3i again removed the congestion and photophobia, and this time the relief was permanent. Two years' use of this agent in phlyctenular ophthalmia has strengthened my belief in it as the most satisfactory method of treatment. I prefer the strength of gr. x-3i, and its use should be continued for a week or two after the eye has become well, in order to prevent the probability of a relapse.

On the subject of the red oxide of mercury Dr. Roseburgh of Toronto, says: "In the local treatment of phlyctenular inflammation, either of conjunctiva or cornea in adults, the plasma of red oxide may truly be said to be a specific. I have used this remedy for nearly fifteen years, and do not remember a single case that did not yield readily to this treatment, and I cannot recall more than four cases where a relapse occurred. The treatment ordinarily lasts but three or four weeks, in slight cases two or three. Even in cases complicated by granulated lids the treatment does not last more than eight weeks. The plasma is applied twice a day under the upper eyelid, and then well diffused over the eye." The doctor uses an ointment of the strength of from one to two gr.-3i of glycerine of starch, being much weaker than the one we have used, and his cases take longer before a cure is accomplished.

A REPORT OF TWO CASES OF TRAUMATIC AMAUROSIS.

W. T. Bacon, M. D., Hartford.

In March 1874, P. R., age thirty-two, laborer, consulted me in regard to his right eye, giving the following history: A few days before he had been thrown from his truck, and struck the right side of his head on

the pavement. The blow was on the temple and quite severe because of the suddenness of his fall, as the wagon wheel plunged into a deep hole, which in the evening he did not notice. He did not lose consciousness, but had violent pain in the head. On examination I found some swelling of the lids, but no apparent injury of the eye-ball. The ophthalmoscope showed the media of the eye clear, and the retina and optic nerve healthy, except slight haziness and redness. The patient persistently declared that he was totally blind in that eye. This being the first case of the kind coming under my observation, I advised him to go to the New York Eye Infirmary for treatment. About a week afterwards he made his appearance at the above mentioned institution, and was examined by Dr. Noyes. He says in a report of the case, "I examined the patient, and for the most part could confirm the statement of Dr. Bacon. The optic nerve was not in a perfectly normal state, but showed some capillary hyperæmia, and haziness of substance, but the large vessels were natural." Careful examination as to the truth of the patient's statements concerning his blindness were made by prisms, etc., but his answers were always consistent. He also complained of trouble in the opposite, the left ear. On inspection a small laceration was found in the membrana tympani. The patient was treated in the Infirmary for about two weeks, when there occurred some loss of sight in the other eye. The cause was found to be neuritis. Shortly after he left the institution, and I have not seen him since. There was no improvement at all in the eye injured, and before leaving the Infirmary atrophy of the optic nerve had commenced. The second case was that of a German gentleman of fifty-three years of age, with the following history: On the first of June while going down stairs with his arms full of spindles he fell, injuring his head and left leg; the fall caused loss of consciousness for a short time, and then followed vomiting. On becoming quiet he complained that he couldn't see anything, not even light. A few days after the accident I saw the gentleman with Drs. Mayer and Chamberlain, and found him in bed in a dark room with his eyes closed, but perfectly rational and able to answer questions. On examination the right eye showed slight ptosis, but moved readily in all directions. He could at this time see a light with this eye everywhere except on the nasal side, and movements of the hand at two feet. The pupil was dilated by atropine previous to my visit. The patient at that time stated that half an hour before he could not see light with that eye. With the ophthalmoscope the media of the eye was found to be clear. The fundus showed the retina and papillæ very slightly hazy, blood vessels normal. Left eye showed marked ptosis, movements of the eye normal; vision nothing, slight perception of light in the tempero superior, and inferior quadrants. No light could be seen on the nasal side. The pupil was dilated with atropine. With the ophthalmoscope, media clear, fundus hazy, especially about the papillæ, vessels about

normal. There were no extravasations of blood in either eye. Improvement in vision went on from the time I saw him until after several weeks he recovered good sight, which he retains to-day. He describes the return of vision as being like looking through the meshes of a net, at first very fine, then growing larger and larger, and finally they entirely disappeared. After the return of vision I examined the eyes and found them healthy in appearance. These cases are interesting for two reasons, namely, on account of their infrequency, and secondly, as to the causes of sudden blindness with no particular lesion of the eye. Stelwag says, in speaking of this class of cases: "Unfortunately only a small portion of these cases have been sufficiently examined, and it is quite probable that very different kinds of affections are classed together, that correspond in the chief symptom, which is the sudden or very rapid diminution or complete destruction of the sensitiveness to light." We come now to the consideration of the cause of blindness in the two cases reported, both having nearly the same history and the same appearance opthalmoscopically, but in the last reported, recovery, while the first remained blind. Of course the diagnosis is somewhat hypothetical, and must be made rather by exclusion, than by the appearance of the eyes. The fact of finding no hemorrhages in the eye or on the retina, throws out the supposition of a ruptured bloodvessel, while the almost healthy look of the nerve militates against the supposition of any extravasation into the nerve sheath, for in this case there would have been swelling of the papillæ. There remains nothing but the direct effect of the blow on the nerve tissues; this is sometimes called concussion of the retina. The first case was considered not to be one of that kind chiefly because only one eye was affected, as no reason could be given why the two should not suffer for an injury inflicting about the same degree of violence on both. Dr. Noyes explained the case to be due to damage of the nerve at the foramen-optieum where it passes from the cavity of the skull to the orbit. "The mechanism is the transmission of force along the dense outer wall of the orbit, so as to concuss the nerve trunk against the sharp edges of the foramen, just as if it were struck with the back of a heavy knife." The fact of there being a rent in the drum of the ear on the opposite side rather strengthens the hypothesis as the petrous portion of the temporal bone is in the same line of direct osseous contact. The action of the blow supposed is obliquely across the base of the skull from the right temporo frontal region to the left ear, while the parts about the left orbit may be protected by hollows in the bone. At first I was disposed to explain the second case in the same way, that is, direct injury to the nerves, but was obliged to abandon the hypothesis on account of recovery. Making a diagnosis by exclusion we are compelled to call it one of concussion of the retina until further investigation in the cases of traumatic amaurosis give us more facts on the subject.

PERITYPHLITIC ABSCESS.

C. W. Chamberlain, M.D., Hartford.

The patient, æ. 37, an inventor and machinist, was seized with severe pain in the right side just above Poupart's ligament, accompanied with a chill, followed by high fever and tympanites. I found, on examination, extreme tenderness on right side of abdomen, less marked generally over abdomen, pulse 130, temperature 105°, and patient complaining of intense pain. I gave 15 m. of Magendie's sol. hypodermically, warm fomentations, and as the bowels had been constipated, 10 gr. calomel, to be followed by an injection of sweet oil. This was about midnight; in the morning I found that the oil had passed away clear, and there had been no movement of the bowels. The tenderness was more localized, tympanites marked. Suspecting either intestinal obstruction or inflammation, I examined the bowels carefully, and found that there was a hard, doughy feeling just above Poupart's ligament, and the tenderness more decidedly localized.

The patient was kept decidedly under the influence of morphia, and poultices applied. Suspecting the nature of the case, I proposed to explore with a hypodermic needle, and to have an operation if pus was found. The exploration was made in the presence of Dr. Jarvis, and pus found. This was on Thursday, the patient first seen Sunday morning. Thursday afternoon the operation for perityphlitic abscess was performed by Dr. Geo. C. Jarvis, in presence of several physicians of this city, and a little over a teacupful of matter discharged. The wound was syringed freely with a weak solution of carbolic acid three times a day, free drainage secured, and carbolic dressings used. The day after the operation the bowels moved three times, and for a time diarrhœa threatened to be a serious complication. The abscess walls were discharged completely in about three weeks, a portion apparently of the vermiform appendix, also, with what appeared to be a concretion. Patient made a good recovery.

COMMUNICATION.

S. W. Rockwell, M.D., East Windsor.

6th. In regard to this question I cannot assert, with confidence, that I have ever known a case of one of the diseases embraced in the inquiry, to arise spontaneously. I was once well assured that I had. I was called to attend on a young girl seven years of age, who I found laboring under a very severe attack of scarlet fever, of the anginous form, from which she died on the seventh day. There were no other cases of the disease in town, and there had been none during the year, and no

ease followed it. It appeared to be perfectly isolated, but the truth respecting it came to light many months afterwards on this wise: A woman from a neighboring State came on a visit to the mother of the child and remained with her some weeks. On her return home she borrowed a cloak of the mother of the child, and before she returned she assisted in nursing a family of children sick of scarlet fever. A few days after the return of the cloak the child sickened and died of the disease as above stated. It was a long time before we were able to assign the death of this lovely child to the true cause. Such causes cannot always be traced, but may always exist. I think they do.

COMMUNICATION.

W. H. Mather, M.D., Suffield.

March 3d, Sunday, at 11 A. M., I was called to see a woman about 45 years of age; Dr. Burnap was also present. We found the patient prostrate, cold, with a clammy feel, yet complaining of heat, and begging for cold water; said she drank three quarts in the night; got up and helped herself at the pump. Her intellect was as clear as ever. She made her will, and gave directions for her funeral, etc.

We administered hot whiskey, carb. ammonia, and hot capsicum tea, applied sinapisms and baths and friction, but we could get no reaction; she died at 5 P. M. She did her own baking on Saturday; said she had a slight chill in the night; complained of a feeling of suffocation and heat, with some restlessness. We have never seen patients die with these symptoms in this latitude. Her appearance was very much like the collapse of cholera. There were no bowel symptoms; no cough to speak of; she vomited once.

Can you give a name to her disease? Should we not have expected the brain would work imperfectly or obscurely? Shall we call it congestion and let it go? I believe Dr. B. reports two *similar* cases occurring in same locality within four days of this one; one died with only fifteen minutes' warning; the other three or four hours.

I had one interesting case of aphasia in a young mother who got up too quick after confinement; was delirious a month, and very feeble. As strength returned, found she could not give the names of her nearest neighbors, nor the names of the groceries on the table. She would say I want — blank. So it continued ten months; she forgets name of her children; is exceedingly irritable and melancholy.

A second case of aphasia in a man 62, caused by a blow on the head. He would call his boots a looking-glass; nearly everything wrong, and at times in whole sentences would utter not one English word or any other known word; syllables of different words intermixed like a basket of chips; confusion worse confounded. He died of hemiplegia.

A CASE OF URETHRAL HEMORRHAGE.

E. P. Swasey, M.D., New Britain.

On the 18th inst., a man, aged 35, presented himself at my office with the following history: About four weeks previous to this visit he had contracted gonorrhœa, which afterwards subsided into a gleety discharge; said he had been treated for stricture recently. At 3 o'clock in the afternoon of the above date, he indulged in sexual intercourse, and during the act hemorrhage began, which had continued, uninterruptedly, up to 6 P. M., at which hour he consulted me. He had been drinking during the afternoon, and was considerably under the influence of liquor. On examination I found that the inner parts of the trowsers were saturated with blood down to the knees, and it was dripping on the floor. When he had unbuttoned the garment I found a clot protruding from the urethra, and a steady flow issuing from the same. I administered 3ii of flu. ext. ergot by the mouth, and compressed the glans to favor the formation of a clot, but without success. I next applied ice to the penis for ten or fifteen minutes with a like result. I then requested him to lie down on his back, and I introduced a No. 12 steel sound, preparatory to bandaging the penis. It passed in so easily, meeting with no obstruction, that I at once withdrew it for the purpose of substituting a larger one, when I noticed that the hemorrhage had entirely ceased. An hour later I applied a bandage to insure him against a return, and gave him another dose of ergot. The first had been vomited shortly after its administration. I have not seen him since, but am aware that up to noon the next day there was no return of the bleeding.

Judging from the appearance of his clothes, and considering the amount lost while in the office, I should say that he lost all of fourteen ounces of blood.

Up to the moment I used the sound the hemorrhage was unabated, but did not recur after its removal, so that I am inclined to believe that it was checked simply by the irritation which the passage of the sound produced.

COUGH FROM RECURRENT LARYNGEAL CONGESTION.

C. W. Chamberlain, M.D., Hartford.

The peculiar climate of New England with its frequent alternations, renders affections of the upper respiratory passages so common that oftentimes they do not receive the attention they deserve from the profession, and the traveling empiric reaps a rich harvest in consequence. There is also, perhaps, a too great reluctance on the part of those who have been long in active work to adopt new

methods and principles, to say nothing of the great temptation to rely upon the administration of drugs alone in the management of disease, and so follow a routine practice, which constantly besets us. Although the more chronic form of nasal, pharyngeal, and laryngeal troubles are somewhat intractable, there are none which are not benefited by appropriate treatment, while a large proportion are relieved completely. The following cases are selected as types of a class that I am constantly meeting, and also as illustrating the advantage of laryngoscopic examination in obscure cases.

Mrs. A., aged 42, mother of three children, had been troubled with winter-cough for several years, and occasionally at other seasons. Tonics, cod-liver oil, counter irritation with iodine, croton-oil, and blisters, had been thoroughly and ineffectually tried, and the case was dragging along, the cough having become constant, until the general health had become seriously impaired. On examining the lungs no very distinctive signs of disease were apparent, nor have any since developed. There was some emaciation, loss of appetite, and digestive derangement. The pharynx, on examination, was nearly normal in appearance, but the upper part of the larynx was congested, and somewhat though not markedly tumefied. The action and appearance of the true vocal cords were normal.

Astringent applications, principally of an extemporaneous preparation of the sulpho-carbolate of iron in glycerine, were made with immediate benefit. No other treatment was employed, the general health improved rapidly, and as the congestion was relieved the cough disappeared. The next fall there was a recurrence of trouble and congestion, but a few applications relieved; several times during the first winter, the congestion and cough returned, yielding readily to local applications. For several winters there has been no recurrence.

Mr. P. of New Orleans, aged 22, cotton-broker, had been troubled with constantly recurring attacks of cough, lasting for several weeks or months, and so severe as to interfere with general health. All forms of internal medication had been tried, with no permanent benefit and very little palliative effect. On examination I found congestion limited to the ventricular bands, or false vocal cords, which were of a dark red or brownish red. The remainder of the pharyngeal and laryngeal mucous membrane appearing healthy; treatment by local applications, stimulant, and alterative, relieved the congestion, and with it the cough. As the patient resided at a distance, he was furnished with a brush and appropriate solutions, and taught to use them. For awhile the attacks returned pretty regularly as before, each yielding sooner and more readily to the treatment outlined than the preceding attack, until finally they ceased to recur altogether, and have not returned for several years, as I learn by correspondence.

Mrs. C., æt. 23, married, a singer in a church quartette choir, came to me for what she supposed must be incipient consumption, as there was some suspicion of hereditary predisposition, and she had a dry cough. She complained of an uneasy feeling in the throat, especially marked after singing, and that her voice became husky at times, and she felt unable to undertake to sing anything requiring the full compass of her voice. There were no distinctive signs of pulmonary trouble, on careful examination. The pharynx, on inspection, revealed a catarrhal condition not at all severe. The laryngeal mucous membrane was very markedly congested, and there appeared to be some nervo-muscular impairment. Although the motions of the vocal cords were complete in all respects, they were not, especially those of adduction, well performed. The general health was excellent, and with the exception of the cough and throat symptoms, she considered herself as in good health. Treatment: astringent and alterative applications with brush and spray, relieved the congestion in a few weeks, and the laryngeal membrane recovered its normal appearance and, with the congestion, the cough disappeared also. The laryngeal muscles regained their normal tone, and although there have been repeated returns of congestion, they yield readily and at once by immediate attention, and no nervo-muscular trouble supervenes. During the meetings at the rink, this year, she sang with the greatest ease and comfort, using her voice to its fullest compass, and indeed has had no symptoms of impairment of voice since the first condition was relieved. The only other treatment besides that to relieve congestion being inhalation of benzoic acid and the like for the vocal weakness.

Mrs. B., age 43, married, mother of four children, general health and family history good. At somewhat regular intervals, during the fall and winter months principally, she had attacks of what her physician called croup, and indeed the symptoms resembled that malady to a considerable extent, a suffocative cough, with the metallic sound usually associated with croup, difficulty in breathing, fever more or less marked, and the usual duration from a week to ten days. On examination during the height of one of the attacks I found the larynx much congested and tumefied so as to somewhat impede respiration, but no evidence of exudation, nor was there any evidence of any in her previous attacks. The trouble was confined entirely to the larynx. Treatment: locally astringents with the brush, iced champagne, and ice freely in the mouth, cold compresses externally, affording relief in a few days. Since that, with one or two exceptions, the attacks have been averted with one or two astringent applications, the exceptions caused by neglect to attend to the incipient symptoms of congestion, but these yielding in a few days to the method described before.

Cases might be multiplied to a great extent if desirable, each

presenting some peculiarity of its own, as the class is a large one, to a great extent, doubtless, due to the peculiar climatic influences, as suggested before. Internal medication affords, alone, little or no relief, while a speedy cure is afforded by local measures. A cough thus induced may lead to greater mischief by causing pulmonary irritation, and as shown in one or two of the cases related, cause serious impairment of general health. This is but one of the many local causes inducing persistent and troublesome cough, but the cases are for the most part clearly defined. When of long standing they induce, by frequent repetition, nervo-muscular troubles of the larynx and chronic forms of laryngeal inflammation, which are oftentimes exceedingly troublesome, and in the case of singers and speakers, causing serious impairment of the singing or speaking voice. The following case illustrates the latter point, and may serve as a type:

Miss G., age 20, a singer in a church choir, etc., of excellent general health and physique, and good family history. For several years she had repeated attacks of what was probably laryngeal congestion, as the symptoms were similar to those described before, and identical with those present when I first saw her, except that there had before been only temporary impairment of voice, which was restored as the symptoms gradually passed away.

On examination the entire laryngeal membrane appeared congested and thickened the action of the vocal cords while complete without any force. The voice was considerably impaired in some tones, especially, and its use for any length of time in speaking or the attempt to sing caused a sense of weariness in the throat, and even a sense of lassitude and depression of the whole system. Indeed, she complained of a constant sense of weakness in the throat which, with the cough and depression induced by the inability to use her voice to any extent, caused constant unrest. The congestion and cough were easily relieved by the treatment described before, but the laryngeal membrane was left much relaxed and somewhat anæmic, and there was no improvement of the voice. The treatment was varied by the use of stimulating applications and inhalations, and electricity, and strychnia internally. The laryngeal membrane gradually returned to a healthy appearance, and the sense of weariness about the throat disappeared, and any trouble in using the voice in speaking or reading in ordinary tones, but there was but little improvement in the voice for singing. She was advised to give her voice complete rest for six months, and not attempt to sing, to take a sea voyage, and to try at intervals the electricity and strychnia. The improvement was quite marked after her trip, and has been steady ever since, and now her voice is as clear and sweet as ever, and used with as great facility, the whole course of treatment lasting eighteen months.

A REVIEW OF THE SURGICAL LITERATURE OF THE YEAR.

By W. A. M. Wainwright, M.D., Hartford, Conn.

In making the following review of the surgical literature of the past year, it has been my aim to bring to notice only those new things which are of practical value to the general practitioner of surgery. I have therefore given no description of the many extraordinary operations which have been reported: such as the extirpation of the spleen (which, I think, has twice been successfully performed); the extirpation of the entire larynx, gastrostomy, the opening of the stomach, etc.

Medical journalism has at the present day attained such vast proportions, and the seeds of practical value, so to speak, are scattered here and there through such an immense amount of matter, that many of them do not meet the eye of the general practitioner, or if they do meet his eye, they do not attract his attention. It has seemed to me that if the many interesting and important facts were brought together and placed compactly on file, it would prove of considerable practical benefit. This is my excuse for the following compilation. I have not attempted to make a classical arrangement, but have given them in the order in which they have presented themselves.

Paracentesis Thoracis in a child two years of age, reported by Edgar Holden, M.D., of Newark, N. J., in the New York *Medical Journal*. This was a case of empyema, in which a large quantity of pus was removed by aspiration, and upon the fifteenth day an opening was made through the walls of the chest by a bistoury. The child made a good recovery. This case is interesting as showing the early age at which such operations may be successfully performed.

Pistol-shot Wounds of abdomen. From Bellevue Hospital are reported two cases of pistol-shot wounds of the abdomen, followed by severe peritonitis, in both of which recovery took place. The wounds were *not* probed. These cases are of interest in connection with the celebrated case of the late "Jim" Fisk of New York. In the trial of Stokes, his murderer, it will be remembered that the claim was made by the defense that death was due to the *probing* of the wound.

External Aneurism.—A new method of cure is related by Dr. Caselli. The case was one of traumatic false aneurism on the thigh.

compression and other means had been tried without success. One day in examining the bruit Dr. Caselli gave the tumor a *quarter of a turn*, and found that the pulsation and bruit immediately ceased. This position was then maintained by suitable bandages, and after four days the tumor was found to be hard and without pulsation. The cure was complete and permanent.

Automatic Reduction of Luxation of Head of Femur. The method consists in flexing both legs at right angles to the thighs, and both thighs at right angles to the abdomen. When in this position the operator, by means of the hands placed beneath the knees, lifts the patient off the bed, and by gradually swinging him from side to side, the dislocated head of the femur slips into the acetabulum.

The method was devised by Dr. Allen of Vermont, and was discovered accidentally in the following way: He was lifting a patient with this luxation from one side of the bed to the other, and while holding him until the clothing was arranged, the bone slipped into place.

In Dr. Bigelow's book the different methods of reduction are described, and although many of them closely correspond with that of Dr. Allen, yet in none is there an absence of interference which would make the process automatic.

Dr. Southey describes to the Clinical Society of London his method of drainage in general anasarca. He uses silver canulae about the size of hypodermic needles, and attaches to them, after introduction, a capillary rubber tube conducted into a pan beneath the bed. Surprising amounts of serous fluid can be withdrawn from a single tube in each leg. The method is cleanly and free from discomfort to the patient.

An exceedingly interesting paper by W. B. Rodman, M.D., of Frankfort, Ky., appears in the *American Journal of the Medical Sciences* for Jan., 1877, on the "Treatment of certain injuries of the head, accompanied by lesions of the brain and its membranes," with cases. From his experience he deduces the following sound rule. "In all cases of doubt as to whether there is depressed bone or not, make an incision—it can do no harm; having done this, treat the fracture as you would a compound one—there is no doubt about the treatment then, because all are agreed on immediate interference in compound fractures." This is contrary to the rule laid down in the books, which is not to interfere unless depression is felt, or symptoms of compression come on.

A second paper from Dr. Rodman, entitled "Successful Trephin-

ing for the relief of cerebral compression from extravasated blood, without existing lesion of the skull or scalp," and dated Frankfort, Ky., March 14, 1878, can be found in the *Medical Record* for April 20, 1878. He recites a very interesting case in point, and the article is well worthy of a careful perusal.

From the Vienna Hospital comes the report that sulphite of soda is preferred to carbolic acid or salicylic, not only as a dressing for wounds, but also in erysipelas. It is much less inconvenient to use, and is much cheaper. It is applied in the same way as Mr. Lister does the carbolic acid, the solution containing one part of the soda, one part of glycerine, and nine parts of water.

Prof. Panas (from the *Revue Medical*) uses with great success in the treatment of ranula, an injection of chloride of zinc, using from three or four to seven or eight drops of a solution from $\frac{1}{10}$ to $\frac{1}{8}$ in strength. The method is applicable to all kinds of mucous and serous cysts.

A simple guide to the differential diagnosis between fracture of the neck of the *os Brachii*, and subcoracoid dislocation is described as follows: The method consists in measuring the injured extremity, and especially the distance between the acromion process and the point of the epicondyle. In every case of fracture of the neck of the humerus, this distance is shorter on the injured side than it is on the sound side, and this shortening is greatest in those cases which most resemble subcoracoid dislocation of the head of the bone. In this latter injury the distance between the above-mentioned anatomical points is increased. When the measurements are taken, the arm should be abducted, and the forearm flexed at a right angle.

Wm. A. Hammond, M.D., records three cases of vascular tumors successfully treated by the injection of fluid extract of ergot. From half a drachm to two drachms was injected at intervals of ten days. In none of the cases was there at any time the least evidence of inflammatory action. He attributes the successful results to the action of the ergot on the organic fibers of the vessels.

Ligation of the common carotid artery in tic-douloureaux is strongly advised by Prof. Patnebau, in a paper read before the Vienna Medical Society. He relates several cases which were successfully treated after all other means had failed.

A new method for the cure of hæmorrhoids, called the immediate cure, is reported by Mr. Reeves in the *Lancet*. The operation consists in puncturing the piles to their bases with a conical-pointed

cautery heated to a dull red heat. The Pacquelin or naphtha cautery is used. Ulcers and fissures in connection with the piles are touched with the cautery. The advantages claimed are :

1st. The operation is quickly done.

2d. The cure is much more speedy, as by the ligature, or clamp and cautery, three weeks is considered quick time for convalescence.

3d. There is no fear of secondary hæmorrhage.

4th. There cannot possibly be a stricture as a result of the operation.

5th. There are no relapses.

6th. In patients who can bear a little pain, no anæsthetics are necessary, as the operation is a quick one.

The use of Esmarch's bandage in the treatment of popliteal aneurism is reported from England. In one case, reported by Dr. Walter Reid, treated at the Royal Naval Hospital, Plymouth, a cure was effected in fifty minutes. Early in the year five cases were reported, three of which were successful, and two unsuccessful. Very recently there have been reported three or four additional failures, and one success. A very useful operation for the obliteration of depressed cicatrices, after glandular abscesses or exfoliation of bone, is also reported from England. The operation is especially applicable to cicatrices on the neck or face, and consists of—

1st. In subcutaneously dividing all the deep adhesions of the cicatrix, by a tenotomy knife, introduced a little beyond the margin of the cicatrix, and carried down to the base.

2d. In carefully and thoroughly everting the depressed cicatrix, turning it, as it were, inside out, so that the cicatricial tissue remains prominently raised.

3d. In passing two hair-lip pins or fine needles through the base at right angles to each other, so as to maintain the cicatrix in its everted and raised form for *three* days.

4th. In removing the needles on the *third* day, and allowing the cicatricial tissue to fall down to the proper level of the surrounding skin. Several successful cases are detailed.

A novel method of reducing strangulated hernia is related by Dr. J. Holmes Joy, of Yarmouth, England. The case was a woman aged sixty; seen thirty-six hours after strangulation. Unsuccessful attempts at reduction by taxis were made. The ether spray was then brought to bear upon the tumor, and in conjunc-

tion the nozzle of an ordinary bellows was introduced into the rectum, and air pumped in. "On the fourth bellows-full being pumped slowly in the bowels were much distended, and by careful pressure and manipulation the hernia was reduced."

I would most particularly commend to those interested in the subject of amputations, a most valuable, instructive, and exhaustive article from the pen of Mr. Holmes, surgeon to St. George's Hospital, London. It is too long to be more than briefly alluded to, and can be found copied from the *Medical Times and Gazette*, in Part LXXV (July, 1877) of Braithwait's Retrospect. As to flaps, he says, "The best stump in the thigh or arm is made by separating skin-flaps on the anterior and posterior aspects of the limb, then making a circular incision through the superficial muscles, then another down to the bone. In the leg and forearm, Teale's method, or some modification of it, gives the best results. The objection to the old circular method is, that the scar necessarily crosses, and almost always adheres to the ends of the bone. He greatly extols Esmarch's bandage, and says its main utility is in cases of excision, operations on bones, removal of deep-seated tumors, etc., and adds: "I have nothing but good to report of Esmarch's plan, though I do not think amputations are the operations best adapted to display all its advantages." He further says: "The idea that pus may be diffused over the cellular spaces of the limb, by the pressure, is, I think, wholly theoretical, at least I know of no case which supports it." He does not believe in the present fashionable germ theory, and after giving his statistics, reasons, etc., sums up as follows: "Yet, although for these and other reasons, I cannot accept the theory in its entirety, and though I give myself no trouble in following out the practice in its minuter details, I would not have you think that I am insensible to the merits of the treatment which Mr. Lister has introduced, or that I have been slow in attempting to avail myself of its numerous advantages; or rather, I would say, in trying to realize these advantages for my patients. And I think I may say that the results have been satisfactory." He advises thorough drainage by means of tubes, and closing up the wound by silver sutures, as better than the "Open Method." "My whole directions," he says, "for the after treatment of an amputation may be summed up in these words, viz.: rest, drainage, and cleanliness." It may be said here that Mr. Holmes is by no means the only prominent surgeon who has lately taken exception to the minute details of Mr. Lister's antiseptic plan of treatment.

Dr. W. J. Walsham relates in the St. Bartholomew's Hospital Reports, Vol. XII, four cases in which he introduced the hand and arm into the rectum for the purpose of diagnosticating the cause of intestinal obstruction. The late Professor Simon of Heidelberg, was the first to make the operation at all common. From his cases and many experiments upon the cadaver, and from the literature of the subject, Dr. Walsham makes the following deductions:

1st. That the hand, if small, can be introduced into the rectum of both male and female without fear of rupture of the sphincter or incontinence of fæces.

2d. That the dilatation of the sphincter should be very gradual, five minutes at least being allowed for its accomplishment.

3d. That no pain or inconvenience is experienced by the patient as an after result of the operation.

4th. That when once through the sphincter, the windings of the gut should be followed very cautiously, by a semi-rotatory movement of the hand, and by alternate flexing and extending the fingers.

5th. That, in many cases, the hand can be passed into the sigmoid flexure, and possibly, in rare instances, into the descending colon.

6th. That should the hand meet with a feeling of constriction about the junction of the first and second flexures of the rectum, no force on any account should be used to overcome it, as this can only be accomplished by rupturing the peritoneum, which is here reflected from the intestine.

7th. That this method of investigation in detecting a stricture high up the rectum, or in the sigmoid flexure of the colon, may prove successful, but a stricture below the descending colon may exist, although the hand may be unable to discover it.

A case of intussusception successfully treated by Dr. Thomas Eastes, is related in the *British Medical Journal*, Dec. 30, 1876. The case was a boy three years of age. The operation was performed fifteen hours after the occurrence of the intussusception. Air was forced into the rectum by means of an ordinary pair of bellows, to the nozzle of which a piece of rubber tubing a yard in length had been attached; the other end being slipped over a gum elastic tube, which was passed into the rectum. The process of inflation took about forty minutes altogether, after which time the swelling could not be felt. The child made an excellent recovery.

The Doctor remarks: "I think there can be no doubt that when

once intussusception is diagnosed an anæsthetic should be given, and inflation tried, as the most successful treatment known, and if that be entirely unsuccessful, the tumor not changing its position at all, I believe that where the diagnosis is certain, the proper step to take is to open the abdomen at once, and draw out the bowel from its enclosing sheath of neighboring bowel as carefully as possible, and close the wound."

Of this operation (Laparotomy), there are thirteen cases referred to in the New Sydenham Society's Biennial Retrospect of Medicine and Surgery for 1873–4, in which five recovered. There have been several successful cases since that time, including one reported by Dr. Henry B. Sands of New York, in the New York Medical Journal for June, 1877. Dr. Sands' case was an infant six months old. Both inflation, and the injection of large quantities of warm water were tried, without success. Laparotomy was then performed with a successful result. Dr. Sands gives a table of twenty cases, including the thirteen mentioned above. Of these seven were successful, thirteen died. The conclusions which he deduces are as follow:

1. The success which has already been obtained in the operation of abdominal section for intussusception, is sufficient to justify its repetition, when other means have proved unavailing.

2. There is reason to believe that in intussusception, as in strangulated hernia, the great danger lies in delay, and that, in acute cases, the operation, to be successful, must be performed at a very early period; probably within twenty-four hours from the invasion of the disease.

3. In chronic cases, the operation is indicated when other means have failed, and there is reason to think that the invagination is still reducible.

4. It has been proved, by the case herewith related, that the operation may succeed in acute cases, if performed during the first eighteen hours.

5. The greater fatality of the operation in infants has been shown to be rather apparent than real, and it remains to be proved whether in them the performance of abdominal section for intussusception may not yield gratifying results.

6. In infancy the operation is the more justifiable, because, during that period, there is hardly any tendency toward spontaneous recovery after sloughing of the intestine.

In the treatment of Cystitis, a method proposed by Dr. George

Johnson, Senior Physician to King's College Hospital, London, is well worth a trial. His plan is to confine the patient to an exclusive diet of milk (*Lancet*, Dec. 16, 1876), no medicine or injections being used. He relates several cases in detail, and says: "I have seen a considerable number of cases of rapid recovery from recent acute cystitis, where the disease has been promptly and judiciously treated, but I never before saw so rapid and complete a cure of severe cystitis, of two years' duration, as occurred in the case just related. The *modus operandi* of the milk is sufficiently obvious. The urine is largely diluted with water, and rendered mild and unirritating by the digestible nature of the food; the bladder therefore being comparatively undisturbed by its contents, reverts to its normal condition; the inflammation of the mucous membrane subsides, and the morbid secretion of puriform mucus ceases." As to the length of time for carrying out the treatment, he says: "When the vesical irritation and catarrh have passed away, and the urine has regained its natural character, solid food may be combined with the milk, and thus a gradual return may be made to the ordinary diet, while the effect upon the urine and the bladder is carefully watched." He adds, "If I might venture to give a hint to my surgical colleagues and friends, I should say that an exclusive milk diet would probably be found very suitable for most patients, during the first few days after the operation of lithotrity, the object being, of course, to lessen, as much as possible, the inflammation and catarrh resulting from the mechanical irritation of the mucous membrane of the bladder." In the cases related the time during which the treatment was continued varied from three weeks to several months.

In the last volume of the Transactions of the American Medical Association can be found an account, with cases, of a new method of treating fracture of the ribs, proposed by Dr. Lewis A. Sayre of New York. It is hardly necessary to say that the method consists in the application of a plaster of Paris casing to the chest. It is claimed for this method, and the claim seems to be very well sustained, that as "the proper indications in treatment of fractured ribs is to keep them still by bandage and compress, and thus prevent any movement of the fractured parts, the plaster of Paris bandage I have now suggested accomplishes that object more perfectly than any dressing now used; and if the chest is fully extended and expanded before it is applied, the adjustment of the fractured bones will be perfect, and if the bandage is properly

applied, it will retain them in position without pain or inconvenience." In describing the method I cannot do better than to use Dr. Sayre's own clear and terse words, "I have since applied the treatment in two cases, with the most gratifying results, both of them strong, laboring men, and one of them very fleshy. In both of these cases I placed the patients on a stool, or chair without a back, and two strong men held a long cane over the patient's head, as high as he could reach; then making the patient grasp the cane by his hands, with his arms widely extended, the assistants lifted the patient nearly or entirely from the chair, while, at the same time, he was requested to take a deep and full inspiration, when, almost instantly, the fractured ribs were replaced in position, and the patient experienced perfect relief in each instance. I then split up the shirt and wrapped it round the body as smoothly as possible, and applied the bandage, wet in salt and water; when it became hard the patients were able to dress themselves and walk about without the slightest inconvenience, suffering no pain from any movements of the arms in different directions, or the slightest difficulty in respiration." The bandages used were "ordinary cross-barred muslin about three yards long and from three to four inches in width, the meshes of which had been thoroughly filled by rubbing in freshly ground plaster of Paris when the bandages were rolled." The bandages are carefully laid round the entire trunk from the axillae to the pelvis, in successive layers, until sufficient are applied to retain the patient in position when the plaster has "set."

In the same volume can be found an interesting paper on the "Surgical Uses of the Strong Elastic Bandage other than Hæmostatic," by Dr. Martin of Boston.

The bandage is made of pure rubber, is ten and a half feet long, three inches wide, and the thickness of No. 21 of Stub's wire gauge. They can be made at any India-rubber factory. Into one end of the bandage two or three inches of strong linen cloth is inserted, and to this is strongly sewed a stout double tape eighteen inches long. These bandages are, it is claimed, of special use in the treatment of ulcers, and varicose veins of the legs. They are also of use in injuries and diseases of the joints, particularly of the knee and ankle; and for these, bandages of varying length and generally wider and of greater thickness are required according to the amount of support, and resistance to the undue motion of the joint, which is sought after. They are also useful

in the following disorders: Disease of the bursal mucosæ, in œdema and anasarca, erysipelas, and erythema of the leg, and also in other cutaneous affections, in rheumatism and neuralgia of the joints. In varicose veins they are a substitute for the elastic stocking.

A very simple, practical, and (which is the most important of its recommendations) *harmless* method of extracting forcign bodies from the auditory canal is suggested by Dr. Geo. Gray, in the British Medical Journal for Feb. 9, 1878. He says: "Among the various means suggested for the removal of foreign bodies from the ear, I see no mention, either in the Journal or in text-books on the subject, of a simple and harmless plan which I have used lately with success. Some months ago, a boy aged twelve was brought to me with a round, smooth, white pebble in the auditory canal. It could be plainly seen, and had been there for two days, during which time, I was told, repeated efforts had been made to remove it, but their only result was to cause pain, congestion, and swelling of the mucous membrane, which firmly grasped the foreign body and prevented the possibility of passing any instrument beyond it. I syringed the ear for some time without any good result, and as his friends were very anxious to have some other means tried, I did not like to send him home unrelieved. Having on hand a bottle of cement, known as coaguline [stratena or any of the other American liquid cements would answer the same purpose.—W. A. M. W.], I prepared a piece of soft pine wood about as thick as a No. 8 catheter, by hollowing the end so as to cause it to fit accurately on the convexity of the pebble. Having now melted my cement, I covered the hollow end of the piece of wood with it and applied it to the pebble. After waiting ten or twelve minutes for the cement to set, I made gentle but steady traction, and had the satisfaction of withdrawing the stone firmly cemented on the end of the wood. This plan will obviously be more suitable for round, smooth bodies which fill the canal, than for small angular ones, but the former are the ones most difficult to remove by any other procedure.

The most recent improvement in antiseptic surgery is the employment of thymol in the place of carbolic acid. Thymol is the essential ingredient of the oil of thyme, and has been used extensively by Professor Volkman of Halle, since the summer of 1877. A full account of its chemical properties, uses, etc.. can be found in the April, 1878, number of the American Journal of the

Medical Sciences, copied from the Medical Times and Gazette of March 2, 1878. A notice of it is also given in the New York Medical Record for April 13, 1878, by Dr. W. T. Bull of New York. If its claims are made good, it will without doubt very largely take the place of carbolic acid. It is used in the same manner as the acid, with the exception that *one* solution of a given strength is used for all purposes. The solution used is as follows:

Thymol, . .	gr. xvss
Alcohol, . .	fl. ʒiij
Glycerine, . . .	fl. ʒss
Water, . .	fl. ʒxxxiv

The claims are, that it does not produce the injurious effects upon the instruments, nor the anæsthetic effects upon the hands of the surgeon, that accompany the use of carbolic acid. The solution is clear and of agreeable odor, and does not irritate the wound, thus doing away with the protective silk. It is more expensive than the acid, but very much less of it is required, and the dressings are retained a much longer time, and the healing process is much more rapid.

In the same number of the Record can be found an interesting article by Prof. Patten of New York on "The operation of Laparo Elytrotomy," which is designed to take the place in most cases of craniotomy and abdominal section in obstetrics. He suggests that it should be called "Thomas' Operation," after the distinguished obstetrician of New York.

In the treatment of Stricture of the Urethra, the specialists are still unagreed. They can, I think, be divided into two schools.

1st. The school which considers a stricture *cured*, when the urethra will readily allow the passage into the bladder of the largest sound which the *slit-up* meatus will receive, it being, however, left in such a condition that a sound must ever after be passed at intervals.

2d. The school which, while it admits the propriety of a perfectly free passage being made for the largest sound, *denies* that a stricture is ever cured by any method which requires the after use of a sound to prevent retraction. Of the first school are Sir Henry Thompson and Wade of London; Hamilton, Van Buren, Gouley, and others of this country.

Of the second school, Professor Otis of New York, is the recent founder. He has some followers in this country, and has an able

defender in R. W. Pease, M.D., Professor of Surgery in the Syracuse (N. Y.) University, whose paper upon the subject, with a detailed account of forty-five cases, can be found in the last volume of the Transactions of the Medical Society of the State of New York, and which will be read with interest and profit by all who are interested in the subject.

It is in the treatment of ordinary permeable stricture that the general practitioner is most interested, and concerning which there is at present great diversity of opinion.

It is, therefore, only to the treatment of that class of cases to which I wish to direct attention, and to bring out the views of the different authorities. The question then is: Shall we dilate, divulse, or incise? From the Vienna hospitals comes the report that "the treatment of stricture here is intended to be very conservative, consisting exclusively of gradual dilatation on the one hand, and external urethrotomy on the other. Divulsion is shunned, and internal urethrotomy is avoided, patience in dilatation being substituted for both." On the other hand we are told by Dr. Otis and his school that no stricture is cured unless it is incised, and not only incised, but incised to the full caliber of the urethra in its widest normal part. An able review of a recent course of lectures upon Stricture of the Urethra, by Sir Henry Thompson, can be found in Braithwaite's Retrospect for January, 1878, written by the editor of the Medico-Chirurgical Review. Against purely mechanical means of treatment Sir Henry Thompson protests most strongly. The mildest means should be used first in this as in every other disease. In the treatment of stricture the surgeon should never go beyond, if he can help it, simple dilatation. He prefers soft to solid instruments, having completely changed his opinion since he first wrote on this subject. In later stages, however, he strongly recommends the employment of polished, conical steel sounds. If simple dilatation fails, his next resource is continuous dilatation by tying a soft catheter into the urethra An urethra which at first only admits a No. $\frac{1}{2}$, may, in a few days, take a No. 12 with ease. The objection to this method is its liability to produce cystitis; this is overcome by Sir Henry, by having the catheter tied in in such a way that the eye is only just inside the bladder, and accurately fixed in this position by being fastened to the penis itself, and cut off to the proper length. Both of these methods sometimes fail on account of the resilience of the stricture, never on account of mere tightness. In such

cases the next resource is internal urethrotomy, and he prefers Civiale's urethrotome, cutting from behind forwards, except, of course, for the meatus or first inch, in which part a small bistouri-caché serves every purpose. He prefers this mode of operating to any more purely mechanical, because he believes it can be more intelligently directed by the surgeon. He says: "Now suppose, for an instant, that it were possible for you to have the stricture before you, open to your eyes and hands; you certainly would take a little scalpel, and employ it for each case according to its needs, intelligently dividing the obstructing fibers, as much as is necessary, and no more. But with a little practice it is perfectly easy to do this, without seeing the stricture; that is, to apply a little scalpel, dividing where you wish, and not elsewhere, just as you divide the constricting fibers in the ring of a hernial sac. And I need scarcely say that this intelligent action of yours will produce something better than the work of a machine which any ignorant person can employ just as well as you. The difference in the two cases resembles that which exists between the music of an organ produced by a handle, and the music which results from the facile hand of a skillful performer." The following is a résumé of the great principles laid down by him in his lectures. Always, whenever possible, use soft in preference to solid instruments. Treat every stricture by simple dilatation, if you can. If that is not successful, or if there is great difficulty in the first introduction, employ continuous dilatation, followed by simple dilatation; and if the stricture refuses to yield to these means, do internal urethrotomy, using some instrument by which the incision can be regulated by the hand of the surgeon. Extraordinary means, such as external urethrotomy, puncture of the bladder, etc., can only be required in rare and exceptional cases. Auxiliary means, such as rest in bed, diet and attention to the bowels, form valuable adjuncts to the treatment; but Sir Henry Thompson does not seem to expect so much from them as some surgeons. As to permanent cure claimed by so many writers, past and present, for their own particular mode, of treating stricture, he does not believe in it. "The treatment has yet to be devised," he says, "which will remove absolutely and for ever the occurrence of recontraction in a patient, once the victim of organic stricture." Concerning this last point, Professor Gross says: "There is one important point which cannot be too forcibly impressed upon the surgeon's attention, namely, the occasional passage of a sound during the remainder of

the patient's life; at first and for a long time, once a week, and then regularly once a fortnight. If this precaution be disregarded, relapse will be inevitable, such is the invariable tendency to recontraction, in the cicatricial tissues at the seat of the stricture. Dr. Van Buren, in his recent work ("Genito-Urinary Diseases, with Syphilis," Van Buren and Keyes), says: "The patient to be treated for stricture should be informed, at the outset, to forestall future disappointment, that after his symptoms have been removed by treatment, the permanence of his cure will almost certainly depend upon his own regular and intelligent use of an instrument upon himself, at proper intervals, with a view of preventing the tendency to recontraction of his stricture." Dr. Van Buren's ideas of treatment are very nearly the same as those of Sir Henry Thompson, the following being his summary:

1st. Alkalies, diluents, and rest are serviceable in most cases of stricture, sometimes indispensable if there be any serious complication.

2d. All uncomplicated strictures, not highly irritable, should be treated by dilatation, with soft instruments up to No. 9; conical steel sounds afterward; reintroductions being made every fourth to eighth day, the older the stricture the longer the interval, as a rule; and intervals of one week being most serviceable in the majority of cases.

3d. All strictures at or near the meatus must be cut.

4th. Resilient, very irritable, and, as a rule, traumatic strictures are best treated by divulsion, if they lie below four and one-half inches from the meatus, otherwise by internal urethrotomy. When a resilient stricture cannot be divulsed, it should be cut internally.

5th. Impassable stricture may usually be overcome (when there is no restriction) by time, patience, and skill, with whalebone bougies. If finally proved impassable, the treatment is external perineal urethrotomy.

The above are the teachings of what I have termed the first school of urethral specialists. The second school starts with the following propositions, which are clearly set forth in the paper of Dr. Pease, alluded to above:

1st. That the means of diagnosis usually employed in developing stricture is exceedingly faulty, as the bougie frequently fails to locate or to give the least indication of contractions that are causing serious disturbance.

2d. That there is a definite relation between the circumference of the flaccid penis and the circumference of the urethral canal.

3d. That, this law established, the treatment of urethral stricture is immensely simplified, and the chances of its perfect cure greatly augmented; as, by this law, we know definitely what must be accomplished to secure a cure, that is, restore the canal in its entirety to its normal caliber.

4th. The metallic bulbs given the profession by Dr. Otis, furnish us with an unerring guide, accurately defining the faintest contraction, and enabling the surgeon to record faithfully and treat intelligently every case that presents itself. This instrument is very completely supplemented by the urethrotome, which enables the surgeon to define, with one instrument, every stricture, and by its dial, measure each contraction, without changing instruments.

5th. Having ascertained the contractions, and ascertained the caliber to which the canal must be restored, what are the best means of securing the result?

"It will be admitted that a stricture consists of a fibro-plastic band surrounding the entire canal, resilient in character, with a tendency to recontract after dilatation. The end of all treatment has been to promote the absorption of the exudates forming these bands which have interrupted the canal. It is not for me to specify the various methods which have been resorted to to accomplish this object; but it will not be disputed that the profession are nearly a unit in employing the system of gradual dilatation, as giving the best results. Indeed they speak of *curing* stricture by this method. But as to the best that can be done by this treatment, it is sufficient to quote from two authorities, which express the sentiment of all the authorities on the subject." Wade of London, and Hamilton of New York, exponents of the first school, are cited to the point.

Dr. Otis' dogma is as follows: that a stricture, divided by his instrument, or by any other, in accordance with the inevitable law of complete division of every fiber, followed by the *daily* use of sounds, of the full capacity of the canal, until all bleeding ceases, *will accomplish* a speedy *cure*.

Dr. Pease sums up in the following words: "We have, by the propositions submitted, an accurate and scientific method of treating a dangerous and repulsive disease, instead of an arbitrary, unscientific, and universally-conceded unsuccessful means of removing a common and distressing surgical malady. Professor Otis invites the profession to a trial of his method, to an examination of his statements; and asks that, having examined and tested, we

give the results of our investigations and experience, that an intelligent opinion may be formed of what is conceded to be a new departure in urethral surgery, so that it may stand or fall by such honest and searching investigation."

As an answer to some of the above propositions, I will make a further quotation from Dr. Van Buren's valuable work (referred to above) and there will leave the subject:

"Cutting (internal urethrotomy) and stretching (divulsion) operations are growing daily in favor in the treatment of strictures of small caliber; yet in a case of uncomplicated stricture, no matter how tight it may be, provided it does not prove resilient, and is not of traumatic origin, if any instrument at all can be passed, dilatation is still the best method of treatment. Scarification and divulsion are only helps. They are attended by danger. They do not cure radically. The sound must be used after them. When pursued with gentleness and care, the patient need not lose a day from business on account of treatment by dilatation, nor be confined an hour to the house, while the risk of exciting complications is at a minimum. The treatment is longer, surely, but if the surgeon will imagine what would be his own wish were he in the patient's situation, he will not hesitate to adopt the safer but more tedious method."

REPLY TO THE CIRCULAR OF THE COMMITTEE.

R. W. Griswold, M.D., Rocky Hill.

Dr. W. A. M. Wainwright, *Chairman of Committee on Matters of Professional Interest:*

The only disease that has "prevailed" has been fever and ague, mostly proper intermittent; but many cases of sickness, undoubtedly due to the same morbific influence, have so varied in their phenomena from typical intermittent, that, so far as a name is concerned, it might be questioned if they rightly came under that head. But the effects of remedies applied, stamps them as resulting from the same causes.

The last cases of continued fever (with a single exception) in my practice, that could properly be called typhoid, were in the fall of 1872. My observation is that the term typhoid fever is indiscriminately applied to almost every case of even mild febrile excitement for which no other name is readily found, even such as

subside in two or three days. Out of their speedy recovery the practitioner builds up a reputation for wonderful treatment of a formidable disease. But pathologically there is no typhoid in them. I repeat, I have not encountered typhoid fever (save a single case in December, 1873) since the fall of 1872. And it is worthy of notice that intermittent began to come in that season, and has continued to increase. This fact provokes the question—Do not essentially the same causes that formerly gave us typhoid and typhus now give us intermittent? In the absence of any known new influence to originate the latter disease, my opinion is positively in favor of the affirmative of the query. Up to 1872 my cases of typhoid were as distinctly such as before, and as severe and fatal.

5. This question opens up an unlimited field not only for the record of observations, but for argument upon the deductions therefrom. If one is that way inclined, he will find no difficulty on looking over the surroundings of almost any case of many of the zymotic diseases, to find something which he can easily persuade himself stands in the relation of cause to it. But the question of relation as cause and effect is more often assumed than demonstrated. It would be idle to say that bad sewerage, drainage, etc., are not frequently the *exciting* causes (whether or not they are the *ultimate* causes is another question) of the differing forms of continued fever; possibly, also, of intermittent and remittent—though of these last my observations compel me to doubt; but in my locality, in which formerly there was a moderate amount of typhoid, and for several years a full share of diphtheria, and for the past five years an abundance of intermittent, I have seldom been able to trace satisfactorily, the exciting cause of any of these to any physical surroundings. I can safely challenge any one to demonstrate the local exciting cause of the present prevalence of ague and fever in my neighborhood; and yet it might not be difficult for one to *imagine* he had found it. But we should be *certain* that the supposed causes produce the observed conditions.

When we find a fever in proximity to an obstructed sewer, it may not be unfair to credit the sewer with the mischief; but when at the same time we find (as we do find) the same fever in some other and remote place, quite as prevalent and quite as malignant and fatal, where no such or other exciting cause can be discovered, we are compelled to admit the existence of some other, though unrecognized, factor beyond. My personal experience (and I here

speak from personal experience only) has been that not only is bad sewerage, etc., not necessary as an exciting cause of zymotic diseases, but that a very small percentage only have their exciting or their ultimate cause in such sources. That sewerage or drainage, bad or good,—that a stream of otherwise pure water, issuing from a living spring, may not be the means of conveying from one point to another certain specific germs of special diseases, which have originated outside of and been conveyed to and deposited in them, is another phase of the question. That the stream we regard as the best means of washing away from us the filth which has accumulated, and which is supposed to be the breeding-place of pestilence, may not bring to us disease-germs more potent for evil than the dirt that it carries away, is a question worthy of grave consideration. But independently of this, that there are other unrecognized forces sufficient to produce the great majority of certain forms of zymotic diseases, seems, from my experience, to be an irresistible conclusion. What those forces may be, neither microscopical examination or chemical analysis have yet determined.

6. This question, in some respects, interlocks the previous one. If we assume that neither of the three diseases named ever appears except from transmission from some previous case, then we may dismiss bad sewerage, rotten garbage, etc., from blame, except as receptacles and conveyers of specific germs born from other causes. But putting this aside,—to say in relation to any case of either of the diseases named, that every *possible* source of transmission from some previous case had been eliminated, would be difficult, except in regard to some person living a more isolated life than any one at present within the knowledge of any of us leads. To be beyond the *possibility* of contagion, in its broad sense, it would be necessary not only to be away from all contact with every other person, but from contact with everything that had ever been near any other person, and from even the winds that had perchance blown over them. In such isolation, in a civilized country, scarcely any human being lives. To answer this question positively in the affirmative may therefore be difficult. But on the other hand, to say that neither typhoid, scarlet fever, or diphtheria, ever arise spontaneously, would be still more difficult, since I presume that almost every country practitioner has seen cases (and I *know* I have myself) where the most diligent search has failed to *find* a source for transmission. My own experience and observa-

tion would justify me in saying that I have no more doubt of the spontaneous origin of diphtheria than of dysentery. The same remark may be applied to typhoid fever, despite the fact that men eminent in the profession are teaching that all cases of that disease are in some way received from the excrementa of some previous case. I am certain that I have seen cases where the line of communication could not be traced; and when it cannot be traced, it is for him who asserts that it nevertheless exists, to prove his assertion; till when, one may be tolerated in his skepticism. As to scarlet fever, there might generally be more doubt of its spontaneous origin. In support of the view that it appears without transmission, some cases may be noted. In March, 1869, scarlet fever broke out in a family in my neighborhood; there were four cases, with one death: the first case, from the lapse of time, seemed to be the parent of the others; but that first case could not be traced to any source of contagion. There were no other cases just before nor immediately after, either in the town or adjoining, so far as could be learned. In January, 1873, a case of scarlet fever, complicated with diphtheria, appeared in another family near me. In due season, three other children in the same family were taken sick in the same way,—two of the four died. The first case was fairly chargeable with the causation of the others; but where that first case came from I could not learn. The evening of the day I received the present circular from the committee, (March 7, 1878,) I was called to the west part of the town to see a child, six months old, previously healthy till the day before; cow-milk fed, from an animal near by; the child having come from Brooklyn, N. Y., along with its mother, nine weeks before. There were no other children in the house; no other children had visited there; the child had been away but once, and then to a near neighbor's. I have made inquiries, and cannot learn of any other case of scarlet fever in those nine weeks, within three miles of that child in any direction. The case was a typical one in all its course; fair to middling as to severity. Now while it would be impossible to say that absolutely there was no source for transmission in this case, it is certain that none could be found; and it is rational to believe there was none. But observation of cases aside,—this logic applies. Somewhere, at some time, there was a case of typhoid fever, a case of scarlet fever, of diphtheria, of small-pox, of syphilis, which were not *communicated*, but *arose*. They were the spontaneous outcomes of certain causes, or combi-

nations of causes, not definitely understood nor intelligently comprehended, but none the less potent in results. To assume that the same causes and combinations, which eventuated in the first case of any of the diseases named, are impotent to ever produce a second and a third, is absolutely irrational; it is none the less irrational to assume that those causes and combinations, in so far as they pertain to all the phenomena of disease, can never exist but once. That like causes which originate a dysentery in one season may and do originate another dysentery in another season, no one will deny; and why any the less a typhoid, a diphtheria, or a scarlatina? Who asserts that they do not, is justly holden to prove the correctness of his postulate.

7. By "diseases of malarial origin," I suppose are meant intermittent fever and allied troubles. I am skeptical as to the malarial origin of these diseases as they at present exist with us. Intermittent has been about as prevalent the last twelve months as the twelve previous; probably 150 cases in a population of 1,000. One death reported: do not know about the case.

10. I have never had any trouble from vaccinations in my own experience. In the autumn of 1874, during a small-pox excitement, a gentleman here—apparently healthy, about thirty years old—was reported dangerously sick from the effects of a vaccination. A lady of about seventy was vaccinated from the arm of this man, and died in consequence. About half the muscular tissue of the fore-arm sloughed away. I did not see either of these cases, and cannot give particulars.

NEW HAVEN COUNTY.

To the Chairman of Committee on Matters of Professional Interest in the State:

There has been no unusual prevalence of disease in general in New Haven during the past year, but the diseases of children have occurred somewhat extensively, namely, diphtheria, scarlet fever, whooping cough, and during the month of July, 1877, diarrhœal diseases caused the death of sixty children under the age of five years. A glance at the mortuary tables reveals the fact that a considerable number of deaths occur each month from diseases of the heart, on an average, I should say, of four per cent. of the whole number, while phthisis pulmonalis causes some fourteen per cent., and diseases of the nervous system and brain about an equal number. Doubtless rheumatic affections, superinduced by the low level upon which New Haven is built, and its proximity to the sea-coast and the consequent dampness, are powerful predisposing causes of heart-disease, while the same local influences also tend to produce phthisis, and the frequency of brain diseases may be fairly attributed to the wear and tear of active life. Typhoid fever has not prevailed very extensively, though almost every month one or more deaths have been recorded from it; in short, typhoid fever has not occurred extensively here during the past ten years. A modification of it, or combination with malarial fever, makes its appearance as a cause of death in the mortuary reports, for the first time in June, 1877, and commencing with four deaths to none from typhoid, and so continues along the year in a variable number of deaths, rising as high as six in November, thus showing that our physicians, to a certain extent at least, practically adopt the view that the type of fever has changed or become modified in its form, yet some maintain that such a modification is imaginary, and that typhoid fever, when it exists at all, exists as that alone, and that whatever malarial features pervade the cases are subsidiary to the general disease. Typhoid fever has not been of as severe or protracted a type recently as formerly. While we would not say that bad drainage and sewerage alone produce the greatest proportion of diseases of a zymotic nature, they are yet powerful accessories, and it is believed that nearly all are due to causes which are external and preventable, as over-crowding, filth, improper clothing, badly-ventilated houses, improper food, and so

on, in addition to bad sewerage and drainage, and that if proper hygienic rules were observed, these diseases, setting aside the influence of purely atmospheric causes, would be practically blotted out, or at any rate greatly modified in frequency and severity. And so far as relates to the production of diphtheria, scarlet fever, and typhoid fever spontaneously, there can be no doubt but that they do arise in such a manner where the above causes abound, and that they are not alone transmitted from individual to individual, though such being the case their intensity and frequency are increased; the fire having been started these additional causes add to it fuel for combustion. Malarial diseases of a sharply-defined type have not prevailed very extensively here during the past year, but the marked forms of malarial disease have occurred, and "malaria" has exercised a certain but probably decreasing influence upon diseases in general as compared with former years. Dr. Lindsley, in his communication, makes some valuable observations upon the subject of vaccination in New Haven, to which attention is called. It is gratifying to be able to note an increased interest in the report in this county on the part of the profession, as manifested in the larger number of replies that have been received. Responses have come from twelve towns and seventeen different physicians. They are here inserted.

W. R. BARTLETT, *Reporter.*

New Haven—*Dr. C. A. Lindsley.* The following responses to the questions proposed by the "Committee, etc.," are respectfully submitted:

Question 1. In New Haven, between April 1, 1877, and April 1, 1878, the following have been the most conspicuous causes of death:

Scarlet Fever,	68
Diphtheria,	75
Membranous Croup,	43
Typhoid Fever,	9
Typho-Malarial Fever,	9
Cholera Infantum,	85
Phthisis Pulmonalis,	149
Pneumonia and Congestion of the Lungs,	76
Bronchitis,	21
All Diseases of the Nervous System,	139
All Diseases of the Heart,	43

Among the diseases of the nervous system, meningitis is charged with forty fatal results, and apoplexy with twenty-four (24).

The above, however, does not fully answer the question, because it is possible that a great variety of diseases may prevail which are not fatal. Thus we have had a good deal of measles during the latter part of the winter and during the spring, of a mild type mostly. The various forms of malarial poisoning have not been less frequent than before, although seldom fatal. And probably neuralgic and other ordinary affections have prevailed as usual. But the above statement shows the causes of death in 717 cases out of a total of 1,263, which occurred during the year ending April 1, 1878.

Question 2. Diphtheria and scarlet fever might be considered such.

Question 3. Typhoid fever has been steadily declining since 1873, in which year there were 55 fatal cases, while in the year terminating April 1, 1878, there were but 9.

Question 5. I have no records upon which to base a direct answer. I do not believe that "bad sewerage, drainage, etc.," are so often the sole original cause of the *specific* zymotic diseases as they are instrumental, in transmitting, perpetuating, and propagating the germs of such diseases. I do not believe small-pox, scarlet fever, or syphilis can occur *de novo* as a result of "bad sewerage, drainage, etc," but all those diseases, and all other diseases, are vastly aggravated in their violence, and their contagious quality rendered far more destructive by the conditions produced by "bad sewerage, etc.," and that the prevalence of most of the zymotic diseases would be reduced almost to the minimum by proper attention to such things, and all that they imply.

Question 6. The answer to this is not within the scope of human intelligence. Nothing short of omniscience can answer it.

Question 7. I do not know whether they have increased or diminished, the difference in their prevalence is not very observable.

Question 8. Almost exclusively, the humanized. In regard to the comparative merits of humanized and bovine virus there is less difference than would be thought from the exaggerated statements of the advocates of either kind. Probably no more extensive trial has been made in Connecticut than the one carried out by the Board of Health of New Haven in 1875, when a general vaccination of the public was authorized at the public cost. The following is a part of the report of the committee who had the management of the undertaking:

Record books were prepared by the committee and furnished to each of the operators, in which they were required to enter the name of each person vaccinated, together with the date, residence, age, nationality, and parentage, whether a primary or re-vaccination, and whether with bovine or humanized virus, and the result. Cards were published and given to each one vaccinated, instructing him or her when to return for an inspection, and also giving directions for the care of the vaccine sore.

Instructions to the vaccinators were prepared and printed for their

use, that they might be reminded of every precautionary measure to render the work both safe and successful.

The work began on the 1st day of March, and continued fourteen days, with intervals after twelve days to inspect the operations already done.

Certificates were given over the signature of the operating physician, to each one who returned for inspection, and upon whom the vaccination had been successful. The following is a summary of the work accomplished. The whole number of vaccinations done 6,876, analyzed in the following table:

PRIMARIES.

Vaccinations.	Whole Number.	Inspected.	Successful.	Failed.	Not returning for inspection.
With Bovine Virus,	719	513	452	61	206
" Humanized Virus,	709	493	417	81	211
Totals,	1428	1011	869	142	417

RE-VACCINATIONS.

Vaccinations.	Whole Number.	Inspected.	Successful.	Failed.	Not returning for inspection.
With Bovine Virus,	2104	1635	1239	396	469
" Humanized Virus,	3344	2564	1817	757	780
Totals,	5448	4199	3056	1153	1249

The re-vaccinations do never afford a satisfactory test of the merits of any sort of virus, and therefore in the foregoing report may be disregarded.

To appreciate the value of the statement respecting the *primary* vaccinations, regard must be had for one or two considerations. The numbers marked as "*failed*" do not represent the exact proportion of failures with either kind, because so large a proportion of those vaccinated did not return for inspection. But as the vaccinations were voluntary on the part of the patient, and in no case compulsory, and as there was a manifest anxiety throughout the community to be protected from small-pox, I think it is the legitimate inference that almost every one of the 417 who did not return to be inspected considered themselves as satisfactorily vaccinated, or they would have returned to have had it repeated. And therefore the reported failures do represent in all probability very closely the total of failures among the primary vaccinations, and the difference between the humanized and the bovine virus is so small that it can as correctly be explained by the difference in the skill of the operators as by the difference in the quality of the virus employed.

In regard to the re-vaccinations the same line of argument does not hold. If there were failures among those not returning for inspection, they would naturally conclude that they were already protected, and it would be needless to repeat the operation. I have kept no record of vaccinations during the past year.

Question 10. Not independent of other injurious influences.

Fair Haven—*Dr. S. D. Gilbert.* In reply to the questions I would say: In this portion of New Haven, and in East Haven, during 1877, the usual diseases common to the seasons of the year have prevailed. There was a small epidemic of scarlet fever during October, November, and December, the majority of the cases mild in type, though occasionally the disease exhibited itself in a malignant form. The treatment was that which general principles would call for. I do not think there is anything which can be at all considered in the light of a specific, and many cases resulted favorably with very little medication. There has been a gradual decrease in the number of cases of typhoid fever since 1873–4, until in 1877 there were very few, and those of a mild type. I cannot say that I have "been able *to trace*" the exciting cause of zymotic diseases to bad sewerage, drainage, etc., but I have no doubt that in a large percentage of cases this cause did exist. I never have known typhoid, scarlet fever, or diphtheria to arise spontaneously. I do not think that malarial diseases have increased in this locality during the past year, but have rather decreased. There is not as much malaria here as in the western and northwestern part of New Haven. It is very fashionable to attribute everything now to malarial poisoning, and I think this is greatly overdone by the laity, and perhaps by the profession in some instances. I use bovine virus entirely, and with this 80 per cent. of vaccinations are successful. Never had any serious trouble arise from vaccination, except in one or two cases of scrofulous children, whose arms swelled greatly, and in which the sores were sluggish in healing.

Waterbury.—*Dr. Bartlett* reports the prevalent diseases to have been typhoid fever, rubeola, scarlet fever, and catarrhal affections. Typhoid more severe and fatal, with increased frequency of hemorrhages. The larger percentage of zymotics can be traced to bad sewerage, etc., as an exciting cause. Malarial diseases have increased of late.

Dr. Castle reports a slight increase in typhoid fever, and a small percentage of zymotics to be traceable to unsanitary conditions.

They both report no epidemic, and use bovine virus without bad results following in any case.

Meriden—*Dr. Churchill.* Answers to questions:

1. Measles prevailed very generally as an epidemic in Meriden during the months of April and May, 1877. Although in many cases the disease was complicated, with quite severe affections of the respiratory organs, still the mortality was very small. About forty of the boys in the State Reform School were down with the disease at one time. Some of the lads were pretty sick, but all the cases terminated favorably. I noticed in some cases upon the decline of the eruption, about the seventh day an intolerable itching, producing severe nervous symptoms, jactitation, and sleeplessness, which were relieved by the bromide of potassium. Scarlet fever and diphtheria have prevailed here to a considerable extent, at-

tended with fatal results in many cases. They occurred mostly in the months of January, February, and March, 1878. I am not aware that any peculiarities of treatment were adopted in diphtheria. I have always depended upon the tinct. ferri muriatis, with nourishment and stimulants, and as most of our cases are of malarial origin, quiniæ sulph. Where there is nasal complication, inject a solution acid carbolic.

2. Yes; scarlet fever and diphtheria.

3. We had a few cases of typhoid fever, but it is not as frequent, severe, or fatal as formerly.

5. It seems as if the exciting cause of almost all zymotic diseases here is bad sewerage and drainage (we have city water, but no sewers).

7. Malarial diseases of a pronounced character, such as intermittent and remittent fevers, have diminished during the last year. The malarial influence shows itself in pretty much all our diseases that we are called upon to treat.

8. I use bovine virus; have seen no bad results.

Dr. Catlin reports intermittent, typho-malarial, and scarlet fevers, diphtheria, and rheumatism, as prevailing diseases. No severe epidemic. Typhoid has not prevailed, but the form changed by malarial influence; malarial diseases have rather decreased in my observation.

Dr. Nickerson. Answers to questions:

1. Diphtheria, scarlatina, rothelyn, typho-malarial, bilious remittent and intermittent fevers, during the warmer months, and pneumonia, influenza, and typhoid fevers during the colder.

2. None that could be specialized from the rest. Our diseases are all epidemic, a sporadic case of any disease being rare.

3. In the fall and early winter we had a small epidemic of genuine typhoid, without the well-marked malarial complications, but there were not over thirty or forty cases in the city.

4. The disease is not as frequent; not attended by as much typhous element, and not so persistent in type; seldom fatal.

5. Fifty per cent.; the remainder owe to these elements a predisposing cause, which determines their fatality.

6. Typhoid generally, diphtheria often, and scarlatina occasionally.

7. Very little *primary* malarial disease, but many and multiform cases of *chronic* malaria.

Derby—*Dr. Pinney.* In reply to the list of questions sent me, concerning the diseases of this locality, permit me to say they have been mostly *malarial in type.* We have also had, during every month of the entire year, more or less cases of scarlet fever and diphtheria. So far as my own observation extends, almost all the cases of scarlet fever and diphtheria have been developed from some atmospheric or epidemic cause, and could not be traced to either contagion or bad sewerage and drainage. In that sense the cases are almost all *spontaneous.* As an example, I have just treated four very severe cases of diphtheria—one of them a

fatal case—in Seymour, developed in four healthy children of healthy parents. There was only three days' difference in the date of the commencement of the disease in the four, which fact I consider conclusive proof that the cause of the disease, whatever it might have been, was the same in all the cases, and that the child first attacked did not communicate it to the other three. The children had not been from home before being attacked, nor had any communication with any person who had had diphtheria, or been in contact with it. I have made diligent inquiry, but cannot learn that there has been any previous case in the village, although the disease has been extending in that direction from Ansonia for several months. I have carefully examined the house occupied by the family, and cannot find in it, or in the neighborhood, any satisfactory cause for the outbreak of the disease. Occasionally the scarlet fever, and the same can be said of diphtheria, has attacked every child in a family, and as often there has been only one or two cases in a family of several children, where there was not even an attempt made to separate the well from the sick. During the summer and fall the scarlet fever was mild, but in December, January, February, and March, the cases have been much more severe, and quite a number have proved fatal.

We have been almost exempt from disease of a typhoid type. There has been no particular change in the drainage, sewerage, or water supply of the town during the past ten years. Five years ago malarial diseases were almost unknown in this village. Everything was typhoid. For the past twelve months I have seen almost no cases of a typhoid character. Every disease has been of a bilious malarial type, requiring regular rations of quinine and cinchonidia, whether we christened our cases pneumonia, dysentery, puerperal or intermittent fever.

In reply to questions 8 and 9, would say, I have no record of percentage of successful vaccinations. I use both bovine and humanized virus with equal success. I have observed serious trouble to arise from vaccination. Two years since a case of variola was discovered in the village, and there was the usual demand for vaccination. I wanted virus for immediate use, and applied to a medical friend in New Haven of large experience and unquestioned ability for a supply. He very kindly offered to go and get a crust for me from a child he had vaccinated with bovine virus that was all right, perfectly healthy, and of perfectly healthy family. He went himself, and found the crust just ready to be removed, and the child perfectly well as far as he could discover. He kindly presented me the larger portion of the crust, reserving part for his own use. I felt I had secured a prize, and started homeward, congratulating myself upon my good fortune. The following day I vaccinated thirteen children with the virus thus obtained. Every one of these thirteen children had more or less trouble with erysipelas. Five of them were very sick with it from one to three weeks, the disease commencing at the point where the virus was inserted, and gradually traveling over the whole surface of the body. Ten days after the crust was removed from the child in

New Haven, she was attacked with exactly the same type of erysipelas which ran about the same course that it did in my cases, although at the time of its removal she seemed to a competent observer to be in perfect health. Since that time I have never felt perfectly safe when inserting humanized virus.

WALLINGFORD—*Dr. McGaughey.* The diseases which I was called to treat the most the past year were malarial. The tertian form of ague was the most frequent; saw but very few quotidian cases during the whole year.

There has been no serious epidemic; typhoid fever has prevailed to a very limited extent.

I have had very good opportunities for observing fevers during the past five years, but have met with, during that period, only four or five cases of genuine uncomplicated typhoid fever. In those cases treated, observed no particular change in type. In this district typhoid fever is not nearly so frequent as formerly, and the mortality has been small.

Have had no zymotic cases which I can trace to sewerage or drainage.

Probably in cases observed, I may mention one exception. A boy five or six years of age was playing around an old well which was being cleaned out. A few days thereafter he was attacked with diphtheria. In this instance I could eliminate every "possible source of transmission," as he had not in any manner been exposed.

Diseases of malarial origin, last year, were largely increased over any of the previous years, except, probably, 1872. In investigating the matter I find eight-tenths of the cases occurred near Community Lake, a large body of water produced by a dam across the Quinnipiac. Almost every individual dwelling, during the summer, on the banks of, or near this lake, came down with some form of ague, big and little, old and young, while those living further away suffered less in a corresponding ratio to the distance from the source of infection. I think the above fact is of more importance, as proving some of the conditions necessary for the production of malarial miasm, for in the early part of summer, on account of litigation between Mr. Mix of Yalesville, and the Wallingford Community, the dam was lowered sixteen inches, thus exposing a vast surface covered with organic matter to decompose in the sun. The largest per cent. of sufferers lived on the eastern side of the lake.

Use both bovine and humanized virus—the latter one or *two* removes from the cow.

Percentage of vaccinations 95 to 98 per hundred.

Have not observed any serious trouble from vaccination up to the present time.

Dr. Harrison reports intermittent fever as prevalent, but malarial diseases not increasing.

Have *seen* severe inflammation from bovine virus some years since.

GUILFORD—*Dr. Talcott.* The prevalent diseases have been consumption, paralysis, disease of heart, and cancer. No typhoid; malarial diseases decreasing in frequency.

MADISON—*Dr. Webb.* There have been no very prevalent diseases; no epidemic; but little typhoid; malarial diseases considerably increased. Bad sewerage, etc., seems an exciting cause in a small percentage of cases.

I use bovine virus.

I never knew any serious consequences to arise from vaccination but once; this was a boy nine years of age whom I vaccinated with humanized virus while I was a medical student; boy's arm was much swollen and inflamed. Some time within two or three months from vaccination a tumor appeared near the site of vaccination and grew rapidly, so that in the course of a year it had attained to a large size. Boy was brought to medical clinic in New Haven; Drs. Knight, Hooker, and Jewett, examined him; thought the tumor might be one of the adipose nature, but could not decide positively, neither were they positive that it originated from vaccination.

As for experience with remedies, would say that I have used codeia, especially when combined with tr. aconite, with success, when its kindred preparations could not be borne. Also think highly of morphia, bromide, bismuth, and lactopeptin; think active cathartics should be used sparingly as a general rule.

CHESHIRE—*Dr. Chamberlin.* I have had a case where the sickness of pregnancy occurred regularly at night instead of in the morning; also a second case where the umbilical cord was attached to the *edge* of the placenta, and lying in the same plane.

A few weeks ago a case of violent and protracted fits of *yawning* in a young man, who, when a boy, had had chorea. The immediate causes appeared to be over-work and irregularity of meals. The disease assumed at one time a serious aspect, but finally yielded to nervines and antispasmodics; the hypodermic injection of sulphate of atropia being twice employed.

In a case of heart disease with ascites and anasarca, very copious diuresis, and great relief were obtained from the application to the abdomen of flannels wet with infusion of digitalis.

Malarial diseases have prevailed, but there has been no epidemic; typhoid fever slighter last fall.

I cannot speak positively, but incline to the belief that from the influence of malaria fatal cases run a shorter course, though I doubt whether the disease is more frequent.

I recall one case of diphtheria (fatal) where the disease seemed fairly attributable to bad drainage, but cannot speak positively in regard to others.

I can recall cases where I could not ascertain, on careful inquiry, any source of transmission. (I may state here that my predecessor, the late

Dr. Driggs, once said that he could not ascertain the source of transmission of the first case of an epidemic of scarlet fever which occurred here many years ago.)

Malarial diseases have slightly increased.

I use bovine virus, and it is generally successful. Have seen no bad results.

BRANFORD—*Dr. C. W. Gaylord.* In reply to questions sent out by "Committee on Matters of Professional Interest," I would make the following statement: The usual diseases in this season—during the summer months—diseases of the digestive tract, inflammatory and non-inflammatory. During the latter part of summer and fall, typho-malarial fever prevailed quite extensively. Typhoid fever was prevalent, and a few cases of diphtheria appeared.

During winter and spring, usual inflammatory affections of the air passages, pneumonia, with a few scattering cases of diphtheria.

Inflammation of mucous membrane and throat, pharyngitis, laryngitis; also tonsilitis have prevailed to an unusual extent. There has been no serious epidemic.

Typhoid fever was more prevalent during the late summer and fall than in any previous season since I commenced practice (1873).

In a majority of cases have been able to find *a sufficient* cause; in only a small proportion have been able to satisfy myself as to the *real exciting cause.*

Have had the care of cases of typhoid fever and diphtheria where I could get *no trace* of *connection with a previous case.* Never found a case sufficiently isolated to warrant the inference that transmission from some previous case was impossible.

I think there has been no increase in diseases of malarial origin; certainly not in those of a decidedly intermittent or remitteut character.

I use bovine quills.

Last spring ('77) I had a large percentage of unsuccessful cases; considered it due to fault in virus. During the fall and spring my primary vacciuations (a few cases only) have been mostly successful, probably four-fifths per cent. Have seen no bad results from vaccinatiou.

HAMDEN—*Dr. Swift.* Malarial, scarlet, and lung fevers have been prevalent. Malarial and scarlet fevers unusually severe. There has been no typhoid fever. There were some cases of apparently typho-malarial. They were much more rapid, sweating occurring early in their course (from 24 hours to 3 days), tympanitis slight, diarrhœa (if existing) easily controlled. The malarial cases appear to me to have arisen from the miasm of our ponds and streams in nearly every instance. Some of my cases of scarlet fever and also diphtheria (as far as I could ascertain) had no connection with any previous case. Malarial diseases have prevailed perhaps no more than during each of the years 1867–8–9, though more than during each year between 1870 and 1877.

I use the bovine virus. Have vaccinated but few persons, but do not recall a failure during the past year; on one occasion, some two or three years since, I failed in every case with a certain lot of bovine virus, but was successful with the next trial. Have seen no bad results except from humanized virus.

SOUTHBURY—*Dr. Burritt.* There have been a few cases of typhoid fever; nothing else worthy of note. Malarial diseases have increased. I use humanized virus, and have never seen any bad results.

ORANGE—*Dr. Nimes.* Typhoid fever has been infrequent and mild. In the majority of cases of zymotic disease I find the exciting cause in bad drainage, etc. In two cases diphtheria appeared to be developed spontaneously.

I prefer the bovine virus, and have seen no bad results from its use.

A CASE OF COMPOUND DEPRESSED FRACTURE OF THE SKULL WITH LOSS OF BRAIN SUBSTANCE. RECOVERY.

W. R. BARTLETT, M.D., NEW HAVEN.

June 28, 1877, was called by Dr. E. A. Park of this city to see John G., a stout young Irishman aged about 21 years, who had just fallen while at work upon an elevated railway, a distance of twenty-five feet, head-foremost upon a pile of hard coal of large size. We found him with a terrible gash upon his head, which extended from just above the inner angle of the left orbit upwards and slightly outwards, a distance of four and three-fourths inches. Upon introducing the finger the bone was found to be fractured and depressed the whole length of the cut, and it was also found that the fracture extended undepressed backwards towards the middle of vertex of the skull beyond the reach of the finger. There was also a transverse fracture about midway of the wound which radiated outward and downward towards the temporal region. In addition both wrists were dislocated backwards, and of course fractured, the left being compound; there was also a bad cut upon the left thigh. In spite of the severe character of these injuries the patient retained his consciousness, though somewhat confused. There was a profuse hemorrhage from the wound owing to the division of a branch of the anterior temporal artery. On further examination it was found that brain substance to a considerable extent was escaping mingled with the blood, thus showing that the membranes of the brain had been wounded and that there was a laceration of the brain substance itself, which of course was the most serious feature of the case, wounds of the envelopes of the brain nearly always proving fatal. I then proceeded to elevate the depressed portion of bone and remove the loose and partially detached portions, Dr. Park

previous to my arrival having removed a few broken pieces. This was accomplished with some difficulty, the mass of bone being wedged down upon the brain; the wound was then brought together by one suture at its middle, lightly dressed with adhesive plaster, and compresses wetted in cold water were directed to be applied. The dislocations and fractures of the arms were now reduced and dressed, and also the wound upon the thigh, and he was ordered to be kept as quiet as possible in a darkened room, and to be given a little light nourishment and cold water to drink. It is not necessary to go into the history of the case in detail, except to say that for the first week he did unexceptionably well; he took little medicine, there was no pain, no rise of temperature, and the pulse did not rise above 80°, and he progressed as well toward recovery as if he had received only a simple scalp wound. Dr. Robert S. Ives now saw the case in consultation. Toward the close of the second week, owing to the patient's imprudence in getting up contrary to my orders, symptoms of brain irritation showed themselves by severe pain in the head; they however disappeared under the use of a combination of bromide of potash and morphia in solution. In three weeks the wound was entirely closed except a small opening near its upper extremity. Upon introducing the probe the bone was found to be denuded for a considerable space. The question arose should any operative measures be taken for its removal. As the patient was doing perfectly well, and there were no symptoms of brain trouble, I resolved to let it remain until exfoliated unless threatening symptoms should supervene of grave import, when I would cut down and remove it, fearing that any forcible removal of it then would enhance the danger of inflammation. No bad symptoms supervened except from time to time severe attacks of pain, and seeming impending inflammation recurred, due partly to the patient's imprudence in going about, which always disappeared on his remaining quiet. On the 23d of October I removed a portion of the necrosed bone, it having become loosened, and subsequently removed small pieces from time to time until January, 1878, when the last portion having been removed the wound closed entirely. The patient now enjoys his usual health, suffering no inconvenience from the effects of the injury.

CONCUSSION OF THE BRAIN AND SPINAL CORD, FOLLOWED BY STAMMERING.

P. A. Jewett, M.D., New Haven.

C. C. P——, male, aged 55 years, an active business man, was injured in July, 1875, by railroad accident. The car in which he was seated was thrown from the track on a spile bridge, and landed on the soft, swampy meadow, a fall of about five feet. The car was turned com-

pletely over. Mr. P—— received a severe contusion on the top of the head; a cut over the left eye that caused the eyebrow to fall over the eye on the cheek; a severe bruise on the right hip, and a concussion of the brain and spinal cord. I did not see him until four or five weeks after, but was told that he was unconscious for a short time after the accident. He, however, soon became delirious, and remained in this condition for several hours. On recovery from the delirium it was observed that he stammered to such an extent that it was almost impossible to understand him. This he had not done before, on the contrary he was a "*glib talker*." The treatment before I saw him had been free cathartics—morphine to subdue pain—cold to the head—and potass. bromide. He also took potass. iodide for about two weeks, in doses of grains 10 every fourth hour. This was discontinued, as he could not retain it.

After a careful examination of the case I decided that there was no inflammation of the brain or its membranes, or of the spinal cord or its membranes, present at that time. He was at once put upon iron, quinine, and strychnine. The morphine was discontinued. The bromide was given at night in doses of 10 grains. For pain in the hip joint, which was severe, I gave a liniment of chloroform, camphorated oil, and tincture of aconite. I also used the brass hammer, heated in boiling water, as a counter-irritant, over the seat of pain. He derived great benefit from this. He was, in a few weeks, able to exercise on crutches. His bowels were kept open by the use of laxatives. He soon began to ride out, and was kept in the open air as much as the state of the weather would permit. After about two months I first noticed a slight improvement in his speech. He has continued to improve up to the present time. He now talks as well as ever, except when laboring under excitement. The other symptoms have also improved. He walks with the aid of a single crutch, and is able to attend to business to a moderate extent. He is, however, far from being well; he has the appearance of a man of 75; his form is bent, and he walks with a shuffling and unsteady gait. It is very difficult for him to fix his attention upon any important business for any length of time without serious mental confusion, and a return of the stammering. I have considered the case as one of concussion of the brain and spinal cord. I find but two cases on record that resemble this in any respect as to the symptom that was so prominent. I allude to the stammering. One where the defect in speech was the result of a similar injury; the other where the impediment existed, to a limited extent, before the injury, and was increased by it.

I have no doubt this patient will ultimately recover, as he is slowly improving. He still continues the use of iron, quinine, and strychnine, with the bromide at night, when necessary to produce sleep. He is able to attend to business to a moderate extent. He suffers more at the

present time from weakness in the lumbar region, and inability to use the right leg with perfect freedom.

Erichsen, in his recent work on concussion of the spine, nervous shock, etc., says (p. 163): "Speech is rarely affected. Case 29 stammered somewhat before the accident, but after it his speech became a most painful and indescribably confused stutter that it was almost impossible to comprehend. The same was observed in the Count de Tordat, a French officer of great rank and much merit. While on his way to join his regiment, in April, 1761, he had the misfortune to overturn in his carriage from a pretty high and steep bank. His head pitched against the top of the coach; his neck was twisted from left to right; his left shoulder, arm, and hand were much bruised. As he felt at the time little inconvenience from his fall, he was able to walk to the next town, which was at a considerable distance. Thence he pursued his journey, and it was not until the sixth day that he let blood on account of the injury to the shoulder and hand. Six months after the accident he began to find an impediment to the utterance of certain words, and his left arm appeared to be weaker. The difficulty in speaking and in moving the left arm increased in 1763. In 1764, three years and a half after the fall, he had become a pitiable object. The saliva dribbled away; he could only utter monosyllables, and these came out after much struggling, in a violent expiration, and with a low tone and indistinct articulation. He died in 1765, nearly four years after the accident."

The cases above stated from Erichsen are not in all respects like Mr. P——. The first stammered slightly before the accident. The second did not present the symptom of stammering until some six months after the accident. They also differ in some other important symptoms. The first case had a slow and incomplete recovery; the second died after an illness of four years.

CARBOLIC ACID AND ITS USE FOR FELONS, CARBUNCLES, AND FURUNCULES.

B. F. Harrison, M.D., Wallingford.

Since 1871 I have treated every case which has come in my way, of felons, carbuncles, and furuncules, with a free application of carbolic acid. With felons my success has been nearly or quite universal. With carbuncles my success has not been quite so complete, but with these there has been a great diminution of pain, fever, and distress, and sometimes complete relief.

With the furuncle, if the matter is not already formed, the relief is usually complete.

For the application I have used the undiluted acid, or with a minute quantity of water to maintain its fluidity.

It must not be diluted with glycerine, for its powers will be so reduced that it will not accomplish the object.

It may be applied with a small swab, and the application should be continued for perhaps ten or more minutes. The skin will turn white, will lose its sensibility, and will ultimately come off.

The pain will usually cease in twenty minutes, and there is no further trouble except from tenderness, and the skin will fall off within a week.

In various instances where the felon had arrested all sleep for two, three, and four days and nights, and where I had every reason to believe that matter was already formed, the pain has diminished, the swelling disappeared, and all has passed away without any evacuation.

My opportunities for using it on carbuncles, and especially in their early stages, have not been so numerous, and I cannot speak so decisively.

Applied to furuncle the relief is immediate and almost complete.

Applied to the nerve of an aching tooth the relief is immediate and complete.

NEW LONDON COUNTY.

Report of the Sanitary Condition of New London county for 1877–8.

Your reporter regrets that he has not received returns to the lists of questions which were sent to the members of the society, from every physician in the county. If he had received that assistance from his brethren, the report for New London county would have been more complete and satisfactory.

The city of Norwich has passed another year free from any epidemic or serious form of disease. Measles have been prevalent during the past three months, but with no unusual severity ; while fevers and acute diseases have been rarely met. An occasional case of diphtheria has occurred. During the year more than one-half of the fatal cases in my practice resulted from organic disease of the heart or lungs. Reports from New London speak of throat affections and diphtheria of a fatal type as having prevailed.

Typhoid fever has prevailed but little in the county, and I do not think any change has been noticed in its type by observers generally. But in Franklin, as reported by Dr. Woodward, the cases were more severe and protracted. Others have not met as severe cases for a few years past.

It is satisfactory that a cause can often be found for typhoid fever, and hence it can be prevented in many instances. Yet the answers to the question, "In what percentage of cases of zymotic diseases have you *been able to trace* the exciting cause to bad sewerage, drainage, etc.?" differ greatly. One says, "Not often;" another, "A large percentage has a reasonably suspected cause in bad drainage, etc.;" another replies, "Should certainly say fifty per cent.;" one more, "Nearly all." Dr. Barber of Lebanon, in a letter thus writes: "In the single fatal case I have had in two years, I *did* trace the exciting cause to a cistern which had gone out of use, in the cellar, and which contained stagnant water." Dr. Nelson of New London, has several cases to the point. Ice poisoned by sewage was in one a suspected cause. Of others, "Two cases were in adults working nine or ten hours near a discharging sewer, in a close place, pent in; also near small accumulations of fœcal matter somewhat scattered about in the shade of several out-buildings." Dr. Woodward of Franklin, says, "A single case of typhoid, which proved fatal at the end of six weeks, might be traced to bad sewerage."

Of defective sewerage as a cause of diphtheria, Dr. Nelson writes: "During the past year I have had bad cases of diphtheria, five fatal out of thirteen, in three houses and three families. One of these houses contains eighteen families, in which house there have been, I am sure, three other such deaths. . . In one of the other houses, a large cesspool and well, both very near back-door, former shaded by thick briers, and under a walk of loose open boards to the privy-vault, also full and shaded, with pigsty and hen-houses connecting. All deaths were of children from three to ten years."

I do not recall a case in my own practice, during the past year, where the exciting cause could be traced; yet I believe that impurities often escape detection.

The question of the spontaneous origin of typhoid or scarlet fever, or diphtheria, is one of great importance, and should be carefully considered. If, in truth, we can assure anxious parents that their families are safe when removed from all possible sources of contagion or transmission, we can administer a vast amount of comfort. I do not believe we can give that assurance. I have had scarlet fever in my own family when I did not know of a case elsewhere, and had not seen a case for months. I have attended it on a farm, where we could not trace any source from which it might originate. I am not alone in my views. Says Dr. Woodward, in reporting for the town of Franklin: "An extreme case of scarlet fever came under my own observation at one time which was believed to have arisen spontaneously." Dr. S. Smith of New London, answers as to the spontaneous origin of the diseases in question, "Yes; scarlet fever, one case well marked and severe; girl, age ten." Dr. Porter of the same city, says: "I have had sporadic cases of scarlet fever in which the source or origin could not be traced, the disease existing nowhere else in the community, the cases being generally mild, and followed by no other instance of the affection." Dr. Barber of Lebanon, in speaking of cases in his practice, concludes: "I am inclined to think that both diphtheria and scarlet fever *do* arise spontaneously."

There is but one opinion expressed by the physicians of the county (those heard from) as to the existence or increase of diseases of malarial origin. They never originate here, and as imported are among the most unfrequent diseases met. But New London reports three or four cases in a swampy region in the outskirts of the city.

The profession differ in their views as to humanized and bovine

virus. Of the positive opinions expressed, Dr. E. C. Kinney of Norwich, says—humanized; Dr. Nelson of New London, says—bovine; Dr. Porter of the same city, answers: "I use bovine, but not with perfect satisfaction;" Dr. S. Smith: "Either, but prefer bovine;" Dr. Barber of Lebanon: "I have determined never to use again anything but bovine virus." Dr. Woodward of Franklin, adds: "I should prefer humanized virus from healthy individuals when there was but one or two removes from the bovine animal." Notwithstanding these opinions, we incline to the use of the pure lymph taken from the humanized vesicle, and from a subject known to be free from hereditary impurities. Such has always served us well, and we know of no reason why we should not be successful in its use in nine-tenths of the cases.

I cannot learn that there has been much vaccinating during the past year by the physicians of this county.

"Have you ever observed any serious trouble to arise from vaccination?"

For myself, I answer, not for many years. Three who have reported to me by letter, answer "No." Others answer "Yes;" and the reports which they present are so full and so much to the point, that I cannot forbear giving the society the full benefit of them. Dr. S. Smith of New London, says he has seen in the practice of others, trouble from humanized virus. Dr. Woodward of Franklin, says: "I saw a vast amount of trouble in 1872. One fatal case came under my observation, in consultation, at the age of sixty-four years. No virus that could be obtained uniformly produced a healthy pustule." Dr. I. G. Porter of New London, presents a report which follows entire.

I have but one more reply to the question.

Dr. Barber of Lebanon, says: "I did observe, after vaccinating with humanized virus during the small-pox epidemic at South Windham, that it gave rise in several instances to a disease totally unlike the true vaccine disease; a spurious vaccine disease. Since then I have used only bovine virus, and have seen nothing but good results."

In conclusion, let me thank those gentlemen, both personally and in behalf of the New London County Medical Society, who have replied promptly and fully to the questions transmitted to them.

L. S. PADDOCK, M.D.,
Reporter for N. L. County.

Norwich.

COMMUNICATION ON VACCINATION.

Isaac G. Porter, M.D., New London.

My reply to your questions respecting vaccination, as furnished to the county reporter, was so full that it could not well be incorporated into his report, and, at his suggestion, I forward you my views and experiences on the subject, as an appendix to your report.

While I use mainly the bovine virus, and have a firm conviction of its inestimable value, as re-introduced, yet I am deeply impressed with the belief that it has attendant drawbacks and inconveniences, some of which may be ameliorated or removed.

Some years since I simultaneously vaccinated two ladies slightly past middle life with bovine lymph obtained from the highest source in New England. They were in ordinary health, though neither of them were rugged, and neither had been successfully re-vaccinated. Without doubt the "matter" was recent and pure, but high inflammation supervened in both at the end of a week, followed by suppuration and sloughing, and although active tonics were freely used, months elapsed before local trouble ceased, and health was restored. More recently, with bovine lymph obtained from another, yet equally unquestioned source, I vaccinated two children from the same package where the development was tardy by one week, an occurrence by no means uncommon in the experience of all, but when the vesicle formed it was blood-red, and resembled the vesicle found in one form of herpes. The friends noticed its peculiar aspect, but as the subsequent stages were normal I regarded the protection as perfect. Other cases about the same time were tardy, and others still which appeared well at the end of a week, but subsequently aborted and have been since successfully vaccinated with humanized lymph. We have all of us doubtless met with cases in infants where the amount of inflammation and suppuration after the use of bovine lymph has been so great as to cause much apprehension, especially if the constitution of the child be faulty and vitality low.

Far be it from me, however, to undervalue or decry the immense advantages which have accrued from renewals of virus by frequent recurrence to the heifer. Still, besides the occasional severity of its action just alluded to, there is the mortification of (often) repeated failures in successfully introducing the virus, either through diminished power of absorption as compared with humanized virus, or because it is naturally *short-lived* on the surface of the quill, or perhaps that, owing to the comparatively small demand for it as now, when, as has been the case for a number of years past, there have been few, if any, epidemics of small-pox. At any rate, while in my own experience I have carefully and anxiously used every method of introduction which has been proposed, my failures at the first attempt at introduction have been more frequent than I should care to acknowledge, and more than occurred in the early years after the re-introduction of bovine, and

much more than when our purveyors used to furnish pure humanized lymph, every *point* of which would "take." Besides the mortification of failure, there is the inconvenience of sending for a new supply of virus to secure ultimate success after failure. Together with the original expense and the trouble attendant, I fear that there are, especially in country villages, very many of the children who have never been vaccinated. The case, it is true, is different where there is immediate and convenient access to the source of supply.

Unquestionably, to the physician and the families which he attends, there is, and always will be, a charm in the use of lymph, that is pure beyond a question. Bovine virus has also a special value in epidemics of small-pox where large numbers require immediate vaccination, because the supply is unlimited, and being entirely recent, is more apt to be efficient. But in the intervals, when the physician's calls are few and rare, how can he best guard against the annoyances to which I have referred? Since our ill-success in first attempts with bovine virus is so great and so unlike our former experience with humanized matter, why will not our eminent providers leave it optional with us to order either bovine or humanized as we choose, they exercising the same care in obtaining the latter as formerly, with the additional advantage of a frequent return to the heifer? The chief argument against this course is this, that it will involve additional trouble and responsibility on the provider.

If such are the views of the profession, and these gentlemen are unwilling to conform to our wishes, we must endeavor to help ourselves. In former years, when the supply of vaccine points had become exhausted, we, physicians of that period, were accustomed to take a well-preserved crust from a well-known subject, and by macerating it in a few drops of water, dividing it into minute portions, and crushing it between two pieces of glass, until it had become of the consistence of cream, and then, having made our interlacing scratches with a lancet, to apply this cream-like substance with gentle pressure and perseverance. It was a little more troublesome than to send for points or quills, but vastly more successful, especially if a minute solid portion or speck of the crust found lodgment in some deep scratch or a slight valvular puncture. Indeed it then never failed. In these days of division of labor and desire to secure rapid results, the process alluded to may savor of the "slow coach," but when we have a number to vaccinate *it will pay*. The same course is available with bovine crusts. Indeed, I have never been more successful than within a few weeks past, when, by securing one good thick crust, one remove from the bovine, from the arm of a perfect subject, I have pursued the course which I have pointed out above. I have said that I was most successful when a minute speck was introduced. This, when from a good subject, can do no more harm than would the same amount of any other kind of solid matter. After the system is infected and there is slight swelling, the speck is crowded out.

REPORT OF A CASE OF SPINAL MENINGITIS WITH NO CEREBRAL COMPLICATION.

Charles M. Carleton, M.D., Norwich.

January 13, 1878, I was called by Dr. L. B. Almy to attend Edward W. Johnson; occupation, bank clerk; age, 29. The early history of the case, which I received from the doctor, the patient, and his friends, is as follows:

Early in the morning of the 7th of January the patient was informed that the water-pipes in the laundry of his house were frozen. He went himself to remove the difficulty. He was obliged, or thought he was, in this labor to lie on his back under the stationary tubs for an hour and a half. There was no fire in the room, and his only clothing was a night-shirt, trousers, dressing-gown, thin slippers, and thin stockings. The clothing on his back became saturated with water. After finishing his task he found himself thoroughly chilled. He took a glass of hot brandy, but ate his breakfast in his wet clothes. After breakfast he dressed and went to the bank. He felt chilled all day; and at night complained of pain and stiffness in the back and neck.

January 8th.—He felt sick, but went to the bank as usual.

January 9th.—He complained of a sore throat, and increased pain and stiffness of the back and neck. He again went to his business as usual. At noon he consulted Dr. Almy on account of his throat. The doctor found the throat ulcerated, and applied with a brush ℞. Liq. Ferri Per.-sulph., ʒi; glycerine, ʒi m. The following evening he attended a party, danced a little, but suffered much, and retired early.

January 10th.—"Felt mean all over," but again went to business, and saw the doctor at noon. The throat appeared somewhat improved; application of previous day repeated.

January 11th.—Again went to the bank, and saw the doctor at noon. Felt feverish; throat better; temperature, 99.5°; pulse, 84. The application to the throat was repeated, and two grains of quinine was ordered to be taken four times a day.

January 12th.—He called at the doctor's office at 11 A.M.; temperature, 100.5°; pulse, 80; throat better; pain in back and neck intensified; application to throat repeated, and quinia, two grs. every two hours, ordered. The patient was sent home and ordered to bed.

At 10 P.M. the doctor saw him at his house. He found him suffering great pain in the back and neck; T., 104°; P., 96. He ordered quinine gr. x, and Tr. Aconite Rad., 1 gt.,—the aconite to be repeated at 10.30 and at 11 o'clock, and afterwards hourly throughout the night.

January 13th.—The doctor saw him at 9 A.M. The temperature and pulse were unchanged. The pain in the back was intense. He ordered quinine 15 grs., and a turpentine stupe to back. Aconite to be continued. At 11 A.M. Dr. Almy resigned the case to me. I however retained

him as an associate, and at the request of some of the patient's relatives, later in the day, called Dr. Sprague. These two physicians worked with me faithfully until the death of our patient, who was, after this, never without the attendance of one of us.

I first saw the patient at 11.20 A.M. He was lying with the head drawn slightly back, but sufficiently so as to be at once noticeable. The face was flushed and bore an expression of intense suffering. He said every movement caused additional pain. His head was unaffected. Temperature, 105.6°; pulse, 112; respiration, 26. After an examination it was apparent that I had to deal with a severe case of spinal meningitis, without cerebral complication. Ordered Tr. Aconite Radicis, 2 drops every two hours. An enema of salt and water was given with good effect; gave potass bromide, gr. xx; diet, iced milk. 2 P.M.—T., 103.4°; P., 94; R., 24.

4 P.M.—T., 102.8°; P., 92; respiration, 24; bromide, gr. 10 every 4 hours. 10 P.M.—T., 103.3°; P., 92; R., 20.

January 14th.—2 A.M.—Slept some during the night, and felt somewhat better, except for the pain in the back. T., 101.6°; P., 90; R., 20.

8 A.M.—The patient slept at intervals. T., 101.8°; P., 88. Ordered Spts. Ether Nit., gtt. xv, with each dose of aconite; bromide omitted.

1.30 P.M.—Headache, confined to occipital region. T., 103.2°; P. 89; bromide, gr. x.

5 P.M.—T., 103.6°; P., 90; bromide, 10 gr.; aconite, gtt. 3.

January 15th.—2 A.M.—T., 103°; P., 88; bromide, 20 grs.; aconite omitted.

6 A.M.—T., 102.9°; P., 88; bromide, 20 grs.; calomel, $\frac{1}{4}$ gr.

2.30 P.M.—T., 106.2°; P., 119; R., 28: full bilious dejection.

7.30 P.M.—T., 103.2°; P., 104; R., 28; bromide, 10 grs.

11.15 P.M.—T., 98.4°; P., 78; R., 23; carbonate of ammonia, 5 grs.; brandy and hot bottles.

2 A.M.—Chill; brandy. The attacks which the patient called "chills," and in which he was suffering from cold, were attended with increased heat, as indicated by the thermometer. They reminded me very painfully of tetanic spasms. They lasted variously from five minutes to an hour and a half. T., 101°; brandy and beef by rectum was given.

6.20 A.M.—T., 104°; P., 106; R., 30; aconite, 1 drop every hour.

9.15 A.M.—T., 102.9°; P., 108; R., 29; felt "chills;" brandy.

10 A.M.—Sinking turn, but no "chill;" pulseless for half an hour; legs and arms cold and numb; marked loss of power on left side; applied dry heat with friction to extremities; brandy and ammonia by mouth and rectum. No record kept until patient began to rally.

6.30 P.M.—T., 105°; P., 116; R., 37; ordered potasii iodide, gr. x, every four hours.

8 P.M.—Dr. John Mackie of New Bedford, Mass., a cousin of the patient, came in consultation. Remained with us all night. Recommended $\frac{1}{2}$ dr. Fl. Ext. Ergot every 2 hours. The first dose was rejected

almost immediately. The second dose, given 30 minutes after the rejection of the first, was retained about fifteen minutes. There had been no vomiting before this. We decided to give up the ergot and gradually increase the dose of the iodide to 20 grains. Chill at 11.30. Resort was had to brandy, ammonia, hot bottles, etc. The friends were called. The patient rallied towards morning.

January 17, 8 A.M.—T., 98.6° · P., 104 ; R., 26 ; stimulants continued.

11 A.M.—T., 101.4° ; P., 100 ; R., 22.

2 P.M.—T., 102.1° ; P., 88 ; R., 22 ; objected to brandy ; gave Madeira wine, 1 drachm every 15 minutes.

4 P.M.—T., 102.6° ; P., 98 ; R., 22 ; wine less frequently. 9.30.—Chill.

11.45 P.M.—T., 105° ; P., 112 ; R., 35 ; aconite, gtt. 2.

January 18, 1 A.M.—T., 104.3° ; P., 108 ; R., 30 ; aconite, gt. 1.

4 A.M.—T., 99° ; P., 78 ; R., 24 ; skin moist ; wine every half hour.

6 A.M.—T., 97.6° ; P., 72 ; R., 17 ; quinine 1 gr. every 4 hours ; wine 3 2 every 15 minutes ; brandy and beef by rectum.

8.15 A.M.—P., 68 ; breath cold ; brandy and ammonia by rectum.

12.15 P.M.—T., 99.4° ; P., 82 ; R., 21.

3 P.M.—T., 100 ; P., 84 ; R., 18.

9.40 P.M.—T., 101.8° ; P., 84 ; R., 20.

January 19, 2 A.M.—T., 101.6° ; P., 80 ; R., 24.

6.45 A.M.—T., 101.4° ; P., 76 ; R., 24 ; brandy and beef by rectum.

8.30 A.M.—T., 101° ; P., 79 ; R., 24 ; ʒi brandy by mouth.

4.15 P.M.—T., 101.4° ; P., 76 ; R., 24.

10 P.M.—T., 101.8° ; P., 76 ; R., 24.

January 20, 12.30 A.M.—T., 101.4° ; P., 79 ; R., 24 ; brandy and beef by rectum.

6.20 A.M.—T., 101.5° ; P., 78 ; R., 28 ; pain and distress in left chest ; ordered mustard paste. 7.45 A.M.—"Chill," vomiting, and dejection.

8.45 A.M.—T., 105.2° ; P., 100 ; R., 30 ; no pain except in back, neck, and head ; ordered ice to head, and sponging of back with alcohol. These gave some relief. 9.05 A.M.—T., 103.8° · P., 95 ; R., 30.

1 P.M.—T., 99° ; P., 76 ; R., 24 ; stimulants continued.

3.30 P.M.—T., 98.6° ; P., 72 ; R., 20 ; brandy and beef by rectum.

January 21, 1.55 A.M.—Pain and great restlessness ; morphine sub. c. ¼ grain ; ⅛ gr. at 2.15 ; opium 1 gr. at 5 ; stimulants continued ; chill 6.30.

10.30 A.M.—T., 97° ; P., 68 ; R., 16 ; brandy and beef by rectum.

10.15 P.M.—T., 102.2° ; P., 84 ; R., 21 ; morphine sub. c. ¼ grain at 11.

January 22, 2.40 A.M.—P., 105 ; R. 21 ; aconite gt. 1.

8 A.M.—T., 101.3° ; P., 86 ; R., 18. Morphine continued.

12 M.—T., 100.4° ; P., 94 ; morphine ¼ gr., aconite 2 gtt.

8 P.M.—T., 104° ; P., 96 ; R., 18 ; aconite 2 gtt. ; quinine continued.

January 23, 1 A.M.—T., 103.5° ; P., 94 ; aconite 2 gtt. ; repeated at 3.

10 A.M.—T., 105.6° ; P., 100 ; aconite 2 gtt. Morphine continued.

January 24, 2 A.M.—T., 102.3° ; P., 96 ; morphine ¼ gr.

10.15 A.M.—P., 68 ; R., 13 ; "chill ;" bowels cold.

3.30 P.M.—T., 101°; P., 84; morphine ¼ gr. Digitalis at 1 and 2 P.M.

8 P.M.—Dr. Calvin Ellis of Boston, in consultation; spent the night with us; advised no change in treatment. The patient had a slight hacking cough during the day. No rales discoverable; respiration possibly slightly roughened. Morphine ¼ gr. at 11.

January 25, 3.30 A.M.—T., 101.5°; P., 86; R., 17; increased quinine to 2 grs. every 4 hours.

6.15 A.M.—T., 105.6° during "chill;" morphine ¼ gr.

12.30 P.M.—T., 97.9°; P., 74; wine; ½ dr. ergot by rectum at 11 P.M.

7 P.M.—T., 97°; P., 64; 24 grs. bromide of potassium by rectum.

10 P.M.—T., 98.6°; P., 72; R., 12; no increase of cough.

January 26, 9 A.M.—T., 103°; P., 96.; morphine ⅓ gr. at 1 A.M.

10 A.M.—P., 86; great tenderness over the spine; 20 grs. iodide by rectum. 12 M.—T., 101.8°; P., 80; R., 24.

2 P.M.—20 grs. bromide and 10 grs. iodide by rectum. Morphine ⅓ gr. at 3. Iodide repeated at 6 P.M. 8.15 P.M.—T., 102.2°; P., 80; R., 22.

12 midnight.—T., 103.6°; P., 86; R., 20; morphine ¼ gr.; cough increased during the afternoon; raised a small amount of frothy mucous slightly tinged with blood in small distinct spots; slight subcrepitant rales in lower left lung.

January 27, 4 A.M.—T., 103.3°; P., 84; R., 22.

6.30 A.M.—Violent paroxysms of coughing without raising much; troublesome numbness of right arm and hand. T., 104°.

7.20 A.M.—"Chill;" T., 107°; spasmodic cough; inhalation of amyl-nitrite was soon followed by comparative quiet. After this the patient called for the amyl, whenever he felt a "chill" coming on.

12.15 P.M.—T., 100.6°; P., 90; R., 28.

January 28, 7 A.M.—T., 104.2°; P., 100. Morphine ¼ gr.

11.15 A.M.—T., 102.5°; P., 100; R., 32; chill at 3.30 P.M.; morph. ⅓ gr.

6.45 P.M.—T., 103.7°; P., 104; R., 28.

12 midnight.—T., 104.3°; P., 116; R., 40; complained of coldness; called for wine and hot bottles.

January 29, 12.30 A.M,—No pulse at wrist; the friends were summoned; he knew every one, and had a last word for all.

5.15 A.M.—T., 103.5°; P., 100; R., 30; ¼ gr. morphine at 9.30.

7.50 P.M.—T., 99.6°; P., 112; R., 28; involuntary stools.

January 30, 1.20 A.M.—"Chill;" pain in bowels; morphine ¼ gr.

4.30 A.M.—T., 104.3°; P., 96; R., 48.

January 31, 6.25 A.M.—Patient died without a struggle. No post-mortem examination was made. I have no record of the action of the bowels after the first two or three dejections. The patient was at no time allowed to go more than three days without one, and as a rule they were more frequent.

EXTRA UTERINE PREGNANCY.

E. Frank Coates, M.D., Mystic Bridge.

I have had under my care during the last year a case of Extra Uterine Pregnancy, which I think of sufficient interest to bring before this Society, and before doing so I think it best to give a brief previous history of the patient:

I was first called to Mrs. J. W. M., aged 21 years and 6 months, an American by birth, and above medium size. April 30, 1875, I found her pregnant for the first time, with general anasarca, indisposed to exercise much, and feared puerperal eclampsia. With appropriate treatment she went to full term, and May 21st I delivered her with the forceps, under chloroform, of a still-born child, after a labor of about twenty-four hours' duration. It was living a short time before its birth. Septicæmia followed. She had pelvic abscess, abscess in the thigh, and did not get well over the effects of the blood-poisoning for more than three months. After dismissing my patient in September, I was not called to her again until February, 1877, when her husband informed me that she was again pregnant, expecting to be confined about April 20th to 25th, and though she felt well, and very different from her former gestation, he wished me to call in some time when I was passing and it was convenient. I found her apparently well; functions normal; countenance good, cheerful, and doing the work for four in the family, and happy in it.

April 4th I was called, and found she had pains that came on the latter part of the previous night, resembling labor pains; made a hurried examination, pronounced the pains spurious, and gave an opiate, which soon quieted her; but she was exhausted beyond what is a common consequence upon such pains, and was able to lie only on the right side. The evening of the 5th she vomited large quantities of bilious matter; the next day a bilious diarrhœa set in, which was checked with opium. I then gave a large dose of calomel, followed by castor-oil. After this she vomited once every morning for some time, but the diarrhœa was easily controlled. The discharges were of a clayey color, for which I gave several blue pills without any visible benefit. The urine during all of this time was normal in quality and quantity. She could lie only on the right side, except for twenty minutes at a time; she would sometimes be turned upon the left, but could not lie on the back. She was restless, requiring a small opiate once every night, and sometimes oftener, to keep her comfortable.

She did not have any more uterine pains, and after waiting about three weeks—the time of her expected confinement—I made another digital examination, finding the uterus high up as before, the os not dilated, neck not shortened, the head not presenting at the brim of the pelvis. The whole fœtus was on the right side, and so high that no

part could be felt with the examining fingers from within the vagina. I had no sound with me, and desisted from further investigation, but had learned enough to inform her husband and mother of my fears.

May 5th she commenced to have a show—shedding the uterine mucosa—which continued without pain from day to day for some time. Her husband getting extremely anxious, requested his old family physician from Rhode Island to see her. The consultation was held May 21st, when I had the patient etherized, so that she could be laid on her back, and introduced the sound three inches within the womb, and could feel nothing but its walls. The uterus had a slight left lateral displacement, and was somewhat flexed to the right. The fœtus was dead, lying on the right of the median line, between the floating ribs and ileum, but the whole abdomen was distended. My counselor had seen nothing of the kind; he evidently knew but little about it, but agreed with me in everything.

June 27th.—The show continues, and to-day she had a fall upon her knees which caused some metrorrhagia, which was soon followed by a dirty, sanious, watery discharge. Afterward she was constipated so that the whole rectum became impacted with feces so as to require large injections of soap and water, often repeated, and their removal caused great pain. I see the patient once a week. She is weak, emaciated, and the show continues,—which, it will be remembered, commenced May 5th,—with occasional passages of a dirty, brown, sanious water, and it is thought there is more of this discharge when she lies on the left side, which she cannot do except only for a short time; but her countenance has improved. She looks brighter, is more cheerful, can eat some better, but milk is her chief support. She sleeps well, but requires opium in some form to keep her easy.

July 18th.—There has not been as much show or watery discharge for the last week. The abdomen is greatly distended, and has been for several weeks. This night a watery, dirty discharge commenced anew, with vomiting, and pain in the back, somewhat severe. The night of the 19th she saturated everything that was laid under her, even to the mattress, and the discharge continued more or less profuse for six days without loss of the patient's strength.

The 25th I find the abdominal enlargement very much lessened and can feel the outlines of the fœtus. Is this the liquor amnii? and is it discharged through the right fallopian tube?

The 30th I am called, and find loss of appetite, with occasional severe spasmodic pains in the back, but not much sanious discharge for the last two days.

August 1st I met Dr. C. M. Carleton in consultation, who agreed with me in the course pursued, and also that unless the condition of the patient could be improved, gastrotomy would result in death. Aug. 3d, patient is more comfortable; has had no severe pains since last seen. The watery discharge commenced again last night; this forenoon it has

been quite abundant, and, for the first time, somewhat offensive. Aug. 6th, has had very little show for about three weeks; no severe pains since last seen; the same discharge continues. She is getting smaller, her appetite is better, but not good, and she has sat up three hours in a day. The 10th she is not as well; appetite very poor, but no severe pain. The night of the 14th had severe pain in the stomach, which lasted until morning, and greatly prostrated her; the same discharge continues. 22d, no pain, not as much discharge, and this has changed; a membranous, a meaty discharge is mingled with it. 29th, quite comfortable; better appetite; some pain, but not severe; discharge muddy-looking, but not so membranous

September 5th.—The shreddy, muddy discharge continues; general health improved. September 12th, the discharge continues muddy and pulpy, and yesterday it was judged that a teacupful of settlings was discharged, and a finger-nail was found on the cloth she wore. She is in good spirits, and thinks she will get well. From the 19th to October 8th she is quite comfortable, and seems to improve in appetite and countenance. There is less of the meaty discharge. She has sat up two hours and more at a time, and walked into the kitchen.

October 16th.—She has not been as well for several days; there is more discharge and thicker, like decayed, chopped meat; countenance has a hectic flush; pulse frequent and irregular; bowels in good condition, and have been for a long time; smell of discharge at times quite offensive. 22d, not much change, but she has discharged two semi-putrid meaty pieces larger than butternuts. 29th, discharge about the same in quantity, but less meaty and less offensive. She was 24 years old yesterday.

November 7th.—More pain, appetite fair, bowels loose but not a diarrhœa. She has discharged two bones of a finger. 23d.—Sleeps well, appetite poor, pulse weak, not much pain, hectic flush on cheek. Has discharged what appears to be pieces of tendon, and one phalangeal and one metacarpal bone, not so much other discharge. 30th.—About the same, pulse very feeble, more discharge, which is sometimes tinged with blood.

December 7th.—She is more restless nights, has neuralgic pains in different parts of the body and is getting smaller. 13th.—Appetite improved, sleeps better, bowels regular, hectic flush nearly gone, discharge continues.

February 28th.—Continues to improve; rode out yesterday without hurting her; has the discharge when she lies down but not while sitting; it is somewhat bloody to-day. There is considerable thickening of the subcutaneous cellular tissue in the lower right hypogastrium where the fœtus was at the first most prominent. She does all her walking in a stooping posture, assisted by a cane or some support, as from the first.

March 21st.—The discharge continues while lying, but is not tinged with blood. It has been of a greenish color and more offensive within

a few days. Occasionally there is some discharge from the center of the umbilicus, and has been for the last two months; it has increased of late, and appears in look and smell like that from the vagina. It probably comes from the sac that surrounds the fœtal bones. She appears as well as when last seen, three weeks ago, but has not improved. She is very sore and cannot bear pressure over the sac, especially on the left side. She has improved in flesh. When at the greatest emaciation a garter of 6½ inches was worn below the knee to hold the stocking; now 9½ inches is required for the same purpose. I have advised gastrotomy as soon as she can willingly consent to it. Her general health is good.

April 14th.—I have been preparing the patient, trying to get her full and free consent to an operation, and finally succeeded. Believing that she will have better care at the New York State Woman's Hospital than her circumstances will allow at home, I have made arrangements to have her taken to that institution, and Dr. T. Gaillard Thomas is engaged to operate. 30th.—Arrived at the hospital at 9½ o'clock A.M. considerably fatigued, but in good spirits, and has borne the journey very well. At 3½ P.M. met Dr. Fordyce Barker and Dr. Thomas in counsel, who agreed with me that gastrotomy should be performed as soon as the patient could be rested and the bowels cleared so as to get ready for it.

May 3d.—The patient is placed on the table and etherized. At 3 o'clock the abdominal cavity was opened, and a sac adherent to the walls and in front of the intestines found which contained but little else except the bones; and as these were turned out Dr. Thomas said to me, "I find everything as you predicted." The sac was entire, but in removing the bones which had become separated and imbedded in its walls, it was torn so as to allow some of its filthy contents to escape into the peritoneal cavity, thus greatly endangering peritonitis and septicæmia. The posterior portion of the sac was then slit open so as to allow free drainage. The cavity was sponged, a drainage tube inserted, and the external wound closed around the tube by silver wire sutures. She was then placed in bed, a hypodermic injection of morphine given, and soon recovered from the ether and shock of the operation, but all who witnessed it believed her chance for complete recovery was very small. The next day I received a telegram from the house surgeon saying she is "doing first rate." 5th.—Dr. Barker informs me that the patient appears "quite bright and cheerful. Her temperature was only 99°, pulse 110, no tympanitis, no peritonitis, and it is rather late to expect a development of septicæmia, and if severe renal complication does not exist she has a pretty fair chance of recovery." 6th.—"The temperature has not risen to 100°, but the pulse has averaged 130–136. She has vomited a good deal of a dark green fluid for the last two days. The abdomen is slightly tender, and it is thought she has peritonitis. The abdominal cavity is washed out daily through the glass drainage tube." 10th.—"She is doing well, has much less vomiting, pulse and temperature both

lower, pulse 120, temperature 98½°." 11th.—Dr. Thomas "regards her as out of danger." 15th.—The house surgeon informs me that "the drainage tube has been taken out, and the discharge is very slight, although fœtid. The average temperature is 99½°. She does not vomit. Her general appearance is excellent. She has overturned all our theories, done better than we had any idea of."

It is now twelve days since the operation was performed, and all doubts in regard to her complete recovery, in my mind, are removed.

This was doubtless a case of tubo-ovarian pregnancy, the fimbriated extremity of the right fallopian tube being dilated to receive a portion of the sac that held the whole fœtal contents; that the sac containing the amniotic fluid burst July 18, 1877, and this fluid passed through the tube, which accounts for the great watery discharge, and proportionate decrease of the abdominal enlargement for several succeeding days, and if my theory is correct, there must have been considerable dilatation of the whole tube, else the small bones and large meaty sloughs could not have passed through. It is now probable that there is but very little of the fœtus or its appendages left but the bones. The sac has contracted so as to alter the position of what there is left and place the whole more central. There has been great abdominal soreness since the case was first diagnosed, but I could not detect any severe salpingitis at any time.

Cases of extra uterine pregnancy, I believe, are much more frequent than many have supposed. In some there was death of the ovum, in others death of the fœtus at term or at some time previous; this has been either absorbed or encysted, and it is now known that cysts containing a fœtus or parts of it have been carried many years without in some cases producing any very great discomfort. Some during this condition have again become pregnant, gone to full term and been delivered of a healthy, living child, and both mother and child did well; others have died after being delivered, and the child live. In others the bones, after being encased for years, have caused ulceration of the cyst and parts adjacent, and some have been discharged.

Extra uterine pregnancy takes place in the animal as well as the human being. A reliable neighbor of mine informs me that he butchered a fat sheep some years since and found a lamb outside of the womb, and that another had butchered a fat sow and found a pig similarly located. Whether these animals had appeared sick previously I could not learn.

In 1858 I was called to Mrs. McL., a native of Scotland, who had been under the care of another physician for an abdominal tumor. She was considerably emaciated at the time of my first visit, so that by abdominal palpation I was confident I could trace the outlines of a fœtus, and diagnosed extra uterine pregnancy in the right side, probably tubal. In a few weeks labor pains came on, which, though quieted by opium, lasted her about two weeks, during which time she expelled triplets, all dead, but large enough to have nearly perfect form. That neither of these were within the womb for the first few days of her pains I know, for during my examination I introduced my whole hand within the vagina, and the index and middle fingers their whole length within the uterus, and there was nothing in it. The placenta decayed and was discharged, *per via naturalis*, in shreddy, putrid masses, it being some two or three months before all was removed. She was reduced to a mere skeleton, but finally made a good recovery.

In 1869 I was called to Mrs. L., a native of United States, with threatened miscarriage. I found that conception had taken place in the right tube, about midway, as near as I could calculate. The fœtus—dead for some time—was, after a few days, expelled, the placenta was discharged in pieces, and the patient recovered; but salpingitis supervened, which troubled her for about two years before she was entirely cured.

In 1873 I was called to attend Mrs. O'N., an Irish woman, at the birth of her first child. The labor was natural, though pretty severe. The child was still-born, and after waiting a suitable time I found all my efforts to remove the placenta fruitless. I then introduced my hand, and, guided by the cord, found only a mass of membranes. By further search I found the cord led into a hole in the right side of the fundus about the size of a half dollar, into which I passed two fingers without being able to distinctly feel the afterbirth. By very careful traction on the cord with the external hand, and grasping the membranes with the hand inside, so as to lift the placenta as much as possible, I finally, after much patient labor, succeeded in extracting the whole mass from its nidus in the tube.

These are all the cases that I have had where I was able to diagnose extra uterine trouble in my own practice, but that other cases may have occurred where the fœtus died early, and I have failed in my diagnosis, is not improbable.

I have been favored with the notes of one case in the practice of Dr. J. A. Miner (who practiced in my vicinity two generations before me) where the pregnancy was abdominal; the woman carried the fœtus seven years, then became pregnant again, went to full term, was then delivered of a healthy female child. The mother died shortly after its birth, and a post-mortem justified the diagnosis made.

Dr. M. Manning—my senior, and now retired from practice—informs me of a case where abdominal pregnancy was diagnosed eighteen (18) years ago. The woman had flooding at three months, which was checked. Her abdomen then continued to enlarge to full term, when she got sick and lapsed into a miserable, feeble condition, becoming greatly emaciated, gradually losing her abdominal fullness, and did not fully recover for four or five years. She is now living, carrying all there ever was, except what has been absorbed, and appears to be in fair health. At present the diagnosis may be doubted, but the history will justify the belief that it may be true.

The daughter of a medical friend, living in an adjoining State, became pregnant within the last year for the first time. Tubal pregnancy was diagnosed early. Fearing rupture, galvanism was tried, and a fœtus was expelled of sufficient size so that the sex was noted. The lady made a good recovery, and now appears well.

Dr. Fordyce Barker lately informed me of a case in which he was consulted by a lady from Pennsylvania. She had previously consulted two surgeons of the first class, who agreed in their diagnosis of carcinoma of some of the pelvic viscera, with ulceration into the rectum. At his first examination he was unable to arrive at any satisfactory conclusion, and requested a little time to study the case and a second visit. In her previous history she mentioned that several years before she believed herself pregnant, but did not have any child, and her symptoms were attributed to some other cause. During his second visit the patient was etherized, the whole hand introduced into the rectum, and two fingers through the opening into the bowels, by the aid of which he was able to withdraw the bone from a dead fœtus. The case was diagnosed according to the facts ascertained. Through the kindness of her physician at home he was kept informed of the progress of the case. She lived two years, and died of some other trouble. A post-mortem examination verified Prof. B.'s diagnosis.

That the literature of this subject has not received that attention that its importance demands, may be inferred from the fact that in the thirty-eight years of the publication of Braithwaite's Retrospect I can find but four cases recorded. One of these was not diagnosed until bones passed per rectum; another was mistaken for ovarian tumor, and another was both extra and intra uterine. Only one was reported in the first twenty years, one in the next ten, and the two others during the last eight years of its existence.

In looking over the forty quarterly numbers of the American Journal of Obstetrics, I am able to find only seven cases reported. In one the case was not rightly diagnosed until bones passed per rectum; in another a post-mortem alone revealed the true condition, and another was found to be both extra and intra uterine. Only two of these cases were given in the first six years of its publication, and the five others during the last four years.

The first systematic treatise on this subject has been written quite recently. Dr. Matthew D. Mann of New York, in his Report on Obstetrics for the year 1876, says: "There seems to have been an unusually large number of cases of extra uterine pregnancy reported of late,—a fact which we must probably attribute to the increased facilities and skill in diagnosis."

FAIRFIELD COUNTY.

Dr. W. A. M. Wainwright, *Chairman of Committee on Matters of Professional Interest in the State*

Dear Sir,—As reporter on matters of professional interest for the county of Fairfield, I submit the following for the year ending April 1, 1878, and enclose twelve communications which I have received from as many members of the profession. When I acted as reporter for this county in 1876, I was favored with but three replies to the printed list of questions; therefore, from the number of replies elicted this year, I am encouraged to think that a new era has been inaugurated in this matter for our county, and notice it accordingly with pleasure. We all have a duty to perform in this direction, and it would undoubtedly be more feasible and pleasant for many of us to discharge it if we were in a less constant state of tension as general practitioners. But if it is true that the hard workers find time to do that which the less occupied often neglect, we should not despair of being able to contribute the results of our labors and observations for publication in the annual volume of transactions of our State Society. Many physicians are so located in thinly populated districts of country that they are more favorably placed to help determine some of the vexed questions in medicine, than their brethren who live in populous towns and crowded cities. It is desirable that such should keep an accurate record of their experience and observations which may finally help determine some of the questions proposed this year. The replies to the first question from the different towns heard from show the prevailing diseases to have been, during the past year, malarial fevers, malarial complications with other diseases, diphtheria, scarlet fever, and a small number of cases of rheumatism and pneumonia. There were the greatest number of cases of scarlet fever in Norwalk during May, June, and July. The type of the disease as a rule was mild, and most of the cases recovered. There were, however, a few very severe cases. I gave the sulphocarbolate of sodium a trial, and although the cases in which it was used did well, I cannot say that they progressed more favorably than under other treatment; and its specific and prophylactic powers were not specially demonstrated in the cases in which it was tried. I saw a fatal case where the drug was given diligently from the commencement of the disease. The greatest number of cases of diph-

theria occurred in Norwalk—as Dr. Barbour has stated in his communication—during May and June. Since then we have not seen so many cases, and those which have occurred have not been so severe nor so fatal. The intestinal diseases of young children and cholera infantum were notably rare in Norwalk during the summer of 1877, and in fact hardly any cases of these diseases were seen here. The summer weather as a rule was not unpleasantly warm, but was unusually agreeable in that respect for the time of the year. The past year appears to have been one of comparative healthfulness in this county.

The replies to the second question do not indicate the occurrence of any serious epidemic.

The answers to the third question show that there has been hardly any typhoid fever in the county. I have not seen a case that I have regarded as true typhoid fever. The fevers which we have met with have in my opinion been uncomplicated remittent fever, and septic fevers, either simple or compound, constituting "typho-malarial" and "cesspool" fevers. If there is any truth in the reported antagonism between periodic and typhoid fevers, we would naturally not expect to meet with the latter during the past twelve years, while we have been struggling under malarial influences. The "cesspool" fever of the Centennial Exhibition did not appear to be typhoid fever, but was septic in its origin, and many of the cases were like those which occur every year in different parts of the country from similar causes. Typho-malarial fever was also apparently contracted by many persons in Philadelphia at the time of the Exhibition. The "Banker Street or mixed fever," which occurred in New York city in the first quarter of this century, and which was described by Dr. Joseph M. Smith of New York, many years ago, was probably typho-malarial fever. Prof. Alonzo Clark of New York, referring to this fever in his lectures fifteen years ago, said: "This mixed fever has lately been common in the army." This was probably the same fever called during our late war by Dr. J. J. Woodward, typho-malarial. So these are not new diseases.

According to Prof. Clark, "remittent fever prevailed in Western New York in 1847, and when it declined typhoid fever began to prevail. The case was similar in Cincinnati. When remittent fever goes out typhoid fever comes in, and one or the other is pretty generally found in every region of the globe." It would appear that there can be a malarial complication with typhus fever,

for in a lecture reported in the New York *Medical Record*, for April 20, 1878, Prof. Clark is reported to have said: "I have long known that a certain relation existed between malarial diseases and typhus and typhoid fevers, but it did not occur to me to give it a name." An illustrative case then follows which occurred in Bellevue Hospital in 1847, the patient having been a young physician sick with typhus fever. "He was from a malarious region, and a year before had had remittent fever." The malarial complication in this case was a profound coma which lasted several hours, when it would disappear, only to recur again on the following day. Quinine was given and the complication was overpowered, after which the typhus ran its regular course and the patient recovered.

Malarial diseases have appeared in Norwalk at three different periods of time during the past one hundred and twenty years, and they have made their appearance pretty evenly about once in forty years. I have been told of its being here in 1780 and in 1825, and now we are suffering from a visitation. I have recently had a patient in this town under my care—who is seventy-seven years old—with severe fever and ague, the first attack being attended by coma. During convalescence he told me that he had the disease forty years ago in the upper part of this town, when at that time nearly every family sickened with it. I received the same kind of testimony from another aged gentleman who lived there at the same time and who also had the disease then. Dr. John A. McLean, an aged physician who has practised in this town for more than half a century, can give facts regarding the epidemic of 1825.

The typho-malarial and septic fevers have some points worthy of special note as distinguishing them from typhoid fever. They are non-contagious. The diarrhœa is not that of typhoid fever. The eruption, when it can be found, is not that of the typhoid affection. The typical temperature of typhoid fever is absent. They differ from typhoid fever in their duration.

None of the correspondents give the percentage of cases of zymotic diseases traceable to bad sewerage, dramage, etc., as an exciting cause, but they undoubtedly believe that septic influence plays an important part as a factor in the production of these diseases.

In response to the sixth question, "Have you ever known a case of typhoid, or scarlet fever, or diphtheria, to arise spontaneously?

(every possible source of transmission from some previous case having been eliminated)," one correspondent answered decidedly in the affirmative, two in the negative; while of the remaining nine, four cannot state positively, and five think that they have met with cases of typhoid fever and diphtheria which arose spontaneously. My friend Dr. Samuel Lynes of Norwalk is fully impressed with the fact that scarlet fever can and does arise spontaneously. I think that I have seen a case of diphtheria which was of spontaneous origin; but I am not so positive in regard to scarlet fever, though I should not be surprised to find it ultimately proved that it too can originate spontaneously. I cannot say anything in regard to the spontaneous origin of typhoid fever. The case of diphtheria to which I refer was in a remote and thinly-inhabited part of this town, and I think the patient still lives in the same house. There were certainly no other cases in the neighborhood at the time, nor did I then know of any cases in Norwalk or vicinity. This was several years ago.

Diseases of malarial origin have been common enough in this county during the past year, though probably there has not been an actual increase in the number of cases as compared with the past few years. The character of the attacks, however, have changed, and we no longer see so many cases of simple fever and ague as formerly, but have various other manifestations. In Norwalk, I think that the primary cases are not increasing; but those who have before had the disease have shown its influence during the past year in various ways, and we are constantly called to see such cases all through this region of country.

My own experience is fully in accord with that of my friend Dr. Barbour, to the effect "that malarial influence is almost sure to show itself after confinement (parturition) in patients who have at any time previously had any malarial affection." I have had a number of examples of this fact in my own practice.

In reply to the question, "In vaccination do you use bovine or humanized virus?" every one of the correspondents write that they use bovine virus, while two write that they use both humanized and bovine. Six write that they rarely fail in primary vaccination, while none give a percentage below seventy-five per cent. of successful operations. A few have met with extensive cellulitis, others have seen skin diseases, and one has seen blood-poisoning ensue. One correspondent does "not like re-vaccination," and writes: "Have used same humanized virus in primary and re-vac-

cinated. The primary cases good, and the re-vaccinated bad, sores. Theory—that in primary cases the vaccine virus saturates the system to the exclusion of anything else; that in re-vaccination, the system being already protected, the vaccine virus has no effect, and the products of inflammation inoculated with the vaccine virus make a troublesome sore."

The reporter has for the past five years used bovine virus almost exclusively, and has succeeded usually with primary cases at the first trial, but is not able to give a greater percentage of successful primary vaccinations than when using humanized virus. Some years ago I vaccinated fifty cases in one afternoon in a large factory in this town with humanized virus on quills. More than half the number were secondary vaccinations, and but few of the operations were followed by undue inflammation. These cases were all females, ranging in age from fifteen to forty years. The operation was successful in three-quarters of the cases. I vaccinated a child with bovine virus about two years ago, and this was followed by a severe attack of eczema and a very sore arm, with perhaps premature dropping of the scab from scratching, which left a more or less deeply excavated open sore, which finally healed, and the child gradually recovered from the eczema. I know this child's father well, and he has suffered from eczema at times. I vaccinated other children with the same virus at the same time, and perceived no complication. I have thought that the local inflammation has been greater in cases where bovine virus has been used. I have used it mainly on account of the satisfaction which people have manifested when assured that it was not from the human subject. I have found it almost impossible to convince many people of the certain purity of humanized virus, and have known that in most cases where any complication has occurred it has been charged to some impurity in the matter used; and this idea is often permanently adhered to, with much unpleasant feeling. I always have the virus fresh, and use it immediately, and take care not to have it exposed to those influences which are known to impair its power. After scratching and cross-scratching to secure an absorbent surface without flow of blood, I have rubbed the moistened quill on the part thoroughly, and have used no covering afterward. I think that where undue inflammation occurs after vaccination with bovine virus, it is chargeable as a rule to irritation of the parts from bruising or rubbing; and other complications which may be met with are often from causes inherent in the individual,

or due to circumstances by which he may be surrounded at the time. I have known the scab to fall from the arm while diphtheria was in the family, and have witnessed the formation of the diphtheritic membrane on the imperfectly-healed surface.

In my report for the year ending April, 1876, I note that I had extracted the formula for "Warburg's Tincture" from *New Remedies* for January 15, 1876, and that I had asked F. A. Reichardt, 404 Fourth Avenue, New York, to make a supply of it for trial. This was the first made in this country of which I have any knowledge. It was a secret remedy until Prof. McLean of England published its composition and mode of preparation in the London *Medical Times and Gazette* for 1875, vol. ii., p. 540. An article also appeared regarding it in the London *Lancet* for November 13, 1875. As this was said to be a remedy of unequaled efficacy in the treatment of malarial diseases, I began giving it in appropriate cases, and have given it in attacks of remittent fever with a very happy effect. If seen early enough the fever is often arrested and broken up, and when this is not accomplished its subsequent course is very favorably modified. I have given the tincture according to the directions, which are, first give a purgative, which when it has acted is to be followed by giving half an ounce of Warburg on an empty stomach without dilution or any drink afterward, and three hours later—nothing having been taken in the interim unless the condition of the patient demands it—another half ounce of the remedy is to be given. "It thus enters the stomach in a highly concentrated state and is no doubt rapidly absorbed." Where a remittent fever has progressed several days when seen, and continues, I have repeated the remedy in the same doses and in the same manner on the following day, and afterward have commenced giving full doses of quinine in the remissions. I have treated a number of cases of remittent fever in this way which had been sick several days when I saw the patient, and the quinine has taken a strong hold and acted well after the Warburg; and I think that by this method of treatment the period of sickness has been shortened and its severity mitigated. Cases of typho-malarial fever are benefited but are not influenced to the same favorable extent as are uncomplicated intermittents and remittents.

"Warburg is a combination of quinine with powerful aromatics." Other chemists have made this tincture during the past two years, and it has been probably tried in different parts of this

country, but I have met with no published testimony from our physicians regarding it. It would seem that it should find a broad field of application in the treatment of the malarial fevers of the Southern and Gulf States. In this section of our country we do not often meet with the malignant malarial fevers in which its saving power has been so fully demonstrated. There are, however, grave conditions in which a large dose of quinine is often indicated, but we fear to give it on account of the fatal prostration and coma which often follow as the effects of a commanding dose given when the heart is acting feebly and the vitality is low. It is under such circumstances as these that we will find a remedy in Warburg in which quinine is so guarded that it will do unmixed good, and therefore we need not hesitate to use it. Many practitioners have, during the past ten years, been called to see severe cases of remittent fever, in which the patient has been found barely alive, and has not taken sufficiently full doses of quinine in the earlier stages of the disease. A full dose of quinine given under such circumstances would only precipitate a fatal issue. In these emergencies Warburg will be found safe and often effectual. An article can be found in the *Practitioner* for February, 1877, on "Warburg's Tincture," by W. H. Broadbent, M.D., of London, England, who relates his experience with it, and gives his ideas of the mode of action of the remedy, and explains what he thinks are the therapeutical principles on which its effects depend. Dr. Broadbent's article will be found very interesting, and he shows that there are conditions—not necessarily malarial in their origin—involving extreme prostration of the vital powers, from which the remedy can rescue the patient. Also, by referring to the *Practitioner* for May, 1877, an article will be found "On the use of Warburg's Tincture," by Dr. James Tompsett of Spanish Town, Jamaica, who writes that he can "testify to its great and certain efficacy."

It has long been a popular belief, but now has become an accepted fact, with many in our profession, that the ante-natal maternal influence is exercised with remarkable power and certainty, and can produce extraordinary effects upon the unborn child. Many authentic cases are now on record in proof of the reality of this influence. I present the following, which have fallen under my notice: A lady of my acquaintance while in the third month of her pregnancy was riding in a street car in which was a young girl who had been born with a hair-lip, which, how-

ever, had been operated upon. The lady could hardly cease looking at the child, although the sight was repugnant to her, and therefore she strove to avoid it. Her child was afterwards born with a red line down across the upper lip exactly resembling the line of cicatrix on the lip of the girl whom she had seen. A lady tells me that while carrying her first child she cherished the idea —instinctively, as far as she can judge—of doing as nearly as possible everything that might favorably affect the infant. Having an especial appreciation of those who excelled as musicians, she played the piano with more or less assiduity, in order that her child if possible might be born with musical taste and talent. The boy is not yet old enough to form a conclusion as to the result, but already at the age of eight years he is able to whistle ordinary tunes which he has heard.

WILLIAM H. LOCKWOOD, M.D.,
Reporter.

ANSWERS TO QUESTIONS PROPOUNDED BY STATE MEDICAL SOCIETY.

Jas. E. Barbour, M.D., Norwalk.

2. During May and June an unusually large number of severe cases of diphtheria occurred, while throughout the summer months very few cases of "cholera infantum" appeared, much below the average of preceding years; ordinary inflammatory diarrhœa of children also less marked. Winter months marked by less sickness than usual; less number of cases of pneumonia and rheumatism, mortality less.

4. Doubtful. In 1869 I attended three cases of typhoid fever, each running a characteristic course, the first of which arrived in town ill with the fever, coming from the interior of New York State, and from an infected locality according to the statement of the patient, a lady of intelligence. Two members of the family into which she came contracted the disease, one of whom died. A relative who watched part of the time, but not a resident of the same house, also contracted the disease, and was under the care of the late Dr. Ira Gregory.

I was then informed by two of the older practitioners that typhoid fever was seldom seen, the only continuous fever being bilious (?) or bilious remittent fever. Dr. S. Lynes now states that since 1860 he has seen almost no cases of typhoid fever. In the same manner in 1867, two cases of *typhus* fever occurred in my practice, one patient developing the disease within a week or ten days after arrival from Ireland, the disease extending to his sister who nursed him, no cases since.

During the past seven years, to my own knowledge, a form of fever of peculiar type, which has received the name of typho-malarial from Dr. J. J. Woodward, has prevailed more or less in Norwalk and vicinity—especially in the coast towns. So far as this locality is concerned it has not supplanted simple remittent fever, but has occurred in company with it, some cases showing the symptoms only of the latter disease, while others have presented those of slight septic influence superadded to the malarial affection, and again others presenting the full clinical history of typho-malarial fever, *i. e.*, the septic (so-called typhoid symptom) predominating. This disease has been often called typhoid fever, especially by the homœopathic physicians. It is true that it has shown symptoms similar but not identical with typhoid fever, due undoubtedly to septic infection, as I have stated, and has been more decidedly marked during certain years, as in 1872, 1874, and 1876, and then *mostly in the autumnal and early winter months.*

While simple remittent fever has been almost as frequently seen in the vernal as in the autumnal season, typho-malarial fever, due to septic and malarial influences combined, has been mostly marked and more severe during the autumnal and early winter months.

The increased decomposition of animal and vegetable organisms, which, together with deficient ventilation, appears to act as the important factor in the genesis of this type of malarial fever, is most pronounced at this season of the year. In the more severe cases of typho-malarial fever, as prevailing in this vicinity, while many of the same general symptoms as in typhoid fever have presented themselves, the disease has shown in its broader aspect a character *sui generis* when the *totality* of symptoms have been appreciated, and in some cases the departure from the former affection in clinical history has been decidedly marked. It may be correct to class it with the "*typhi-fevers*" of Chambers (T. K.) From classical typhoid fever, the "typhoid affection" of Louis, it differs in the following particulars:

(1) It is doubtful if it is at all infectious from stools or other excretions of the patient. Cases occurring in certain localities or houses are most invariably followed by other cases within a few days, if at all; and after thorough cleaning and disinfection of the premises no further extension of the disease is seen, while nurses and watchers from other neighborhoods escape as the rule.

(2) In its access it is more sudden and sharply marked, beginning with a chill. Although in a certain proportion of cases suboccipital neuralgia and myalgia are complained of, with tendency to retraction of the occiput for a few days, 2 to 4 or 5, before the initial chill.

(3) In the large majority of cases it shows a weekly periodicity, marked by lower than average fall of temperature, sometimes by a chill, or again by profuse perspiration. Its usual course is four, six, five, or eight weeks, in the order of frequency indicated, terminating during

some seasons with more or less pronounced tertian ague. This was especially marked in 1872 and 1874.

(4) The temperature of patient is more variable from day to day; generally impossible to recognize the double thermometric curve of typhoid fever, and never, in my experience, as distinctly.

(5) Almost invariably there is a slightly bronzed hue of the complexion, and at times a more or less jaundiced appearance. Splenic enlargement and hepatic tenderness more marked as a rule, but perhaps not in all cases.

(6) Gastric disturbance, manifesting itself in nausea and vomiting, in the majority of cases in the early stages of the disease, and especially at its inception, conjoined with epigastric tenderness. Tympanitis not as pronounced; and although sensitiveness to deep pressure in right iliac region is in most if not all of the severe cases marked, it is not seen as early nor is it as a rule as pronounced as in typhoid fever.

(7) As to the skin, the eruption, the "rose-colored, lenticular spots" or papules of Louis are very rarely if ever seen. Although I have carefully searched for them, I can recall but one case, and that I considered doubtful. While a sudaminous eruption after the second week is not infrequent, and in the majority of cases very copious if about to prove fatal.

(8) As to hemorrhages, except in cases demonstrating a purpuric or hemorrhagic tendency, there is absence of epistaxis as an initial symptom. In my own practice it has not been seen save in two cases, and these were marked by this symptom at times throughout the disease, as well as by intestinal hemorrhage and ecchymotic patches in the skin and bleeding from the gums. In one of these cases during the latter part of the third week well-marked dysenteric symptoms supervened.

The dysenteric symptoms I have seen in three other cases: in one, conjoined with intestinal hemorrhage. Have not seen a case of intestinal perforation.

(9) As a rule there is more disturbance of the respiratory functions. Bronchitis, involving the smaller bronchial tubes, is more marked. More danger of catarrhal pneumonia, with subsequent cheesy degeneration and peri-bronchitis. The same statement applies to the sharply marked remittent fever without septic infection. In some cases the diagnosis, for four days, doubtful, having in mind acute tubercular phthisis. The above statements are based upon the observations of thirty-four cases.

Query: Is this the same type of fever, varying with certain seasons, and the general environment of the patient, which was formerly called "bilious remittent fever"? It is to be remembered that in some cases the hepatic and gastric symptoms form a large element in their clinical histories, while the enteric symptoms are not so fully characterized.

5. As this question covers so broad ground I am not prepared to answer it, and speak only in regard to *diphtheria* and *typho-malarial* fever. Regarding the former, I doubt its spontaneous origin, and think

that often simple croupous pharyngitis and peri-pharyngitis are confounded with it; yet I have not always been able to trace cases to an infective source, nor to attribute it to unsanitary surroundings. Regarding the latter, I think that in almost every case deficient drainage, decomposing animal and vegetable organisms on the premises, filth and poor ventilation, or other anti-hygienic conditions, have been clearly demonstrable. In $\frac{75}{100}$ of the cases such conditions were very evident. The following illustrative cases I append:

(1) In one family, in which two cases occurred, drippings from the refrigerator in cellar had been allowed to run into the cellar bottom of earth, and on digging up the soil, the stench was fearful. (2) In another instance six patients in a boarding-house were ill, two of whom died. For months large supplies of vegetables and meats had been stored in the cellar, which had not been thoroughly cleaned out for some time; also water from a cistern constantly leaked into the cellar. In this house only those who slept upon the first floor immediately over the cellar, together with two of the servants, contracted the disease, while seventeen persons whose apartments were upon the second and third floors escaped. (3) In another locality the cistern was situated so near the privy, and on lower level, that when the privy vault was moderately well filled the cistern water was offensive; water was used for culinary purposes only, it was claimed. (4) In this case the cistern leaked into the cellar, and the earth at this point, on being dug into, emitted a very foul odor. (5) A case occurring in a very healthy neighborhood, when at first I was at a loss to account for the appearance of the disease, was traced to a farm-house out of this town at which the patient, a young man, had boarded for some ten days, and where, I was informed, subsequently, sickness occurred about the time my patient left, followed by death of one of the family. (6) Five operatives in a factory near Norwalk, who lived in same boarding-house, were attacked by the disease. Ventilation was deficient, the location unsalubrious, and, owing to neglect, the sewerage from the factory was very defective—the room in which they worked having a very unpleasant odor—some days almost unbearable on first opening the apartment in the morning. Two other female operatives and one male, from the same factory, were also under my care about the same time, and believe that Dr. Barton of Westport attended others. Dr. Lynes also saw two or more cases, as did Dr. W. A. Lockwood, both of Norwalk. (7) In still another instance the cellar of the house was damp, and full of decomposing garbage. The patient lived upon the first floor, and a sister who visited her also contracted the disease, while another family living on second floor escaped the disease.

Instances might be multiplied, but the above are typical. So far as I know, and I have inquired, after thorough cleaning, disinfection, and ventilation, no new cases have occurred even to this date—some of the cases showing themselves in 1872 and 1874. In the immediate neighborhood of some of the cases above alluded to, malarial fevers of a simple remit-

tent type prevailed, uncomplicated by the sepsis which seemed to play an important rôle in the causation of the typho-malarial cases. These facts indorse the view that putrescent substances may act as factors in the causation of the disease; and the term of Murchison, "pythogenic," while of doubtful value as applied to typhoid fever, might be used here, bearing in mind, however, the malarial element more or less strongly marked in the cases. It may be that, strictly, pythogenic fevers have at times prevailed, and received the name of typhoid.

7. In my opinion, simple malarial affections have not increased. Very few, if any, cases of simple intermittent fever are seen; most of the cases are of a mild remittent type, malarial neuralgias, or of an irregular character ("dumb ague"), in about same proportion as in the preceding year, while a marked abatement, as contrasted with 1873, is noticeable. However, malarial influence is apt to complicate most cases of sickness, and is almost sure to show itself after confinement (parturition) in patients who have at any time previously had any malarial affection.

8. Bovine virus used.

9. Successful primary vaccination, probably 95 to 98 per centum. Sometimes fail at first, from delay in using the virus.

10. No; save quite sharp cellulitis in some cases, especially in secondary vaccination in adults. I am inclined to believe that the bovine virus causes more decided inflammatory symptoms. I was informed that a child aged six or seven years, whom I vaccinated while in good health, subsequently became ill from the vaccination and died. She had removed from the town, and I could not verify the statement of her father, who was also a member of a profession which, by training and habits, "is accustomed to view facts unequally."

W. S. Todd, M.D., Ridgefield.

Dr. W. A. Lockwood:

Dear Sir,—I deeply sympathize with the object desired to be attained by the "Committee on Matters of Professional Interest in the State," and regret my habit of procrastination, which prevents my giving as full a report each year as my sense of duty anticipates doing.

My field of practice includes the southern half of Ridgefield, and parts of Redding, Weston, Wilton, and Lewisboro adjacent. From my observation, extending over nine years of time, I am led to conclude that we are remarkably free from epidemic and endemic influences, tuberculous troubles, and, until the past two years, *entirely* free from malarial influences.

In the western part of this town lies a small natural lake, the outlet of which flows into a small artificial pond, which supplies motive power to a small mill. Each day the water in this pond is drawn down so that the bottom is left exposed several hours. Vegetation is quite rank in grasses and flags. The road passes near this pond, and near by

are located five houses, the inhabitants of which have been more or less affected with intermittent fever during the past two years—never before. The farthest house in which the disease has appeared is about one-third of a mile distant, and some one hundred and fifty feet above the pond. I can assign no sufficient reason for the recent outbreak, unless the small amount of rainfall for the past three or four years is the predisposing cause.

Early in the spring of 1877 I had an unusual number of cases of acute rheumatism, a rare disease here, but since then no disease has prevailed. The year has been healthy, fifty per cent. more so than the previous one.

I have had two cases of bad arms, inflammation and purulent discharge. Other members of the same families successfully vaccinated with the same matter at the same time.

In addition I would state that the year past has been remarkably healthy, the diseases of each season few and very light. Intestinal troubles were light; no dysentery, and during the winter no lung diseases to speak of, and catarrhs light.

From the returns made to the town clerk, I find that of the 17 deaths last year,

1	was under	1	year of age.			
1	" between	10	and	20	years of age.	
1	" "	20	"	30	"	"
1	" "	50	"	60	"	"
2	were "	60	"	70	"	"
6	" "	70	"	80	"	"
4	" "	80	"	90	"	"
1	was "	90	"	100	"	"

1 aged 17, died of phthisis.

N. E. WORDIN, M.D., BRIDGEPORT.

DR. LOCKWOOD:

Dear Sir,—I yesterday received the circular from the "Committee on Matters of Professional Interest in the State," calling for a report and an answer to questions proposed, and take an early opportunity to reply. I foresee at once that the task will not be an easy one if I am to answer accurately and carefully. I shall, therefore, not try to do this, but give, what I suppose is desired, a general idea.

I. No new diseases have developed. Malaria has been, if anything, more prevalent than before, its more common form being headache, malaise, pain in the back and soreness throughout the muscles, rather than the fevers of former years. In addition to malaria (so comprehensive a term), we have had diphtheria, scarlet fever, and bronchial troubles. The winter has been exceptionally free from pneumonia. I send you the mortuary list of the city as far as it has been made out, but some of our physicians made no report of deaths to the town. For instance, the

record of burials at one cemetery show more deaths through one physician than the entire number against him on the town records. The law which began to be enforced a year ago, that no body should be buried without a proper certificate from some physician, is totally ignored. In fact it was never properly carried out for one week. Can not the medical men of the State do something to better such a deplorable condition of affairs?

There has been no serious epidemic. The scarlet fever has been mild in its form, and I think that most of the diphtheria has been in our eastern district, so-called.

III. I have neither seen nor heard of a case of typhoid fever since the annual report last year.

IV. Having been a practitioner for but five years, I cannot answer this question. It is my impression, however, that the disease is not so prevalent as formerly. The part it plays among the diseases, I actually find is certainly not what I expected and feared from the accounts I had had of it previously. As to its severity and fatality I cannot say as compared with what it has been. This I believe that many of the cases of typhoid fever now reported, are not such as would be so classed by the skillful, careful physician, but are typho-malarial. I believe that a case of clear characteristic typhoid fever "pur et simple" is a rare thing.

V. I am not able to answer this question intelligently, since it is so important. I have not investigated sufficiently as to the cause of the disease. Our city is in a deplorable condition so far as its health laws and their enforcement are concerned. The Medical Association of our city have made efforts to have a new Board of Health organized, so as to be efficient, but our Common Council do not seem to consider it of importance enough.

VI. I have known of typhoid fever and diphtheria which seem to me to have arisen spontaneously, but it is very difficult to eliminate sources of transmission from previous cases. With scarlet fever it is impossible, but the other two diseases, especially the former, are not so markedly contagious. It is my opinion, however, that almost all the cases of typhoid fever and diphtheria do arise spontaneously—if by spontaneously is meant some local cause.

VII. My answer to this question is: I believe that malarial diseases have increased in proportion to other diseases to a considerable extent. I cannot give the proportion.

VIII. I always use the bovine quills.

IX. Where quills have been sent that they considered reliable, *i. e.*, with which they were not experimenting, my percentage of successful vaccinations for the past year has been about 99 per cent.

I regret that I cannot give you a more satisfactory report. No. V is the most important question. I see it is the central point of the entire report, and yet I am satisfied that but few physicians investigate the

sewerage, drainage, etc., of the houses sufficiently to answer with intelligence. I certainly have not traced the exciting cause of diseases such as are inquired about.

H. Powers, M D., Westport.

I saw but one case of typhoid fever in 1877, and that was contracted out of town. A few cases of typho-malarial fever came under my observation. During the previous year, 1876, I treated a considerable number of what I called purely typhoid cases; four occurred in one house, one of which proved fatal. From an observation of the premises I was led to believe that these cases were caused by drinking contaminated water, and I accordingly advised a thorough examination of the well and drains. Much to my disappointment nothing was done about the matter. There were no other cases in the vicinity of this house, nor to my knowledge any malarial cases near by.

As to question No. 6, I cannot answer it in the affirmative. It is evidently a very difficult matter to eliminate every possible source of transmission. Take scarlet fever; how often children are seen running around the street during the desquamative stage of the disease; perhaps no physician having been employed at all, the parents not even having a thought as to the true nature of the case. The fact of the country being so thoroughly infested by tramps and beggars must not be overlooked. It is, undoubtedly, a prolific source.

In answer to question No. 10, I would mention that in one of my cases last summer—though I failed to get a vaccine pock—at the point of vaccination a bulla appeared, which I called rupia simplex. Soon other bullæ came out near the first, and in three or four weeks from time of vaccination there was an eruption extending over half the arm, each circular about size of half dime to dime, thin crusts forming and coming off after a few days, leaving red and slightly inflamed base; very little ulcerative action. (Perhaps eruption might be classed under head of Pemphigus.) The eruption subsided under treatment in six or eight weeks. (Schoonover's virus was used in this case.) A few weeks after this the child (eight months old) was taken with the congestive and febrile form of cholera infantum, under which it rapidly succumbed.

A CASE OF "HEMIPLEGIA ALTERNANS," OR "CROSS PARALYSIS."

W. C. Burke, Jr., M.D., South Norwalk.

One of the rare results following inter-cranial lesions is that of "Hemiplegia Alternans," or cross paralysis—first named and described by Gubler—in which the encephalic nerves are affected upon one side, and the spinal on the other.

Various forms of cross paralysis are seen as the lesion is in the crus cerebri, upper or lower part of the pons varolii. Where a cross paralysis occurs from hæmorrhage into the crus cerebri, the extremities are affected on the side opposite to the lesion with partial or complete anæsthesia, and owing to the fact that the third pair has its origin in part from the crus, we have ptosis and external strabismus upon the side corresponding to the lesion. But it is when the pons is the seat of the lesion, that we have the more marked hemiplegia alternans. Diverse symptoms and characteristics are stamped upon the paralysis arising from lesions of the pons, according to their location. None can be said to be certainly pathognomonic. The cases reported are too few in number, and many of these so deficient in their clinical symptoms as to render them of slight value. But it seems to be a point very generally accepted by nuero-pathologists, that where we have the muscles supplied by the encephalic nerves paralyzed on one side with those of the opposite extremities, we are to look in the lower part of the pons varolii upon the side corresponding to the facial paralysis near the medulla oblongata for the lesion. But it has been denied upon the eminent authority of Trosseau, quoted by Gubler, and supported by additional cases cited by Luys, that lesion of the pons is always, or even necessarily followed by cross paralysis (Hammond). However this may be, the pons is generally considered to be the seat of the accident in marked cases of this affection. Accepting this to be true, the lesion will be found upon the same side of the pons as the facial paralysis, and opposite to that of the affected extremities, unless the clot forms in the mesial line or raphe pontis, when both sides will be affected alike.

This clinical fact can only be explained by assuming that the lesion has severed the nerve filaments coming from the extremities after (*i. e.* above) their decussation, and the fibers of the facial nerve before (*i. e.* below) their decussation in the raphe pontis. Although this will satisfactorily account for the clinical phenomena, yet it does not appear quite clear upon the present anatomical knowledge of the decussation of nerve fibers in the pons varolii. One of the resulting effects from hæmorrhage into the pons, is an affection of speech which Lyden has designated as anarthria, and describes as characteristic of hæmorrhages in this locality. This anarthria results from injury of the hypoglossal nerve in the enunciation being more or less unintelligible, and is to be distinguished from aphasia, which is caused by a lesion in the fissure of sylvius

in proximity to the Island of Reil. According to Nothnagel, hæmorrhages which into the hemispheres would not cause death, occurring in the pons varolii, cause a fatal result almost without exception, within a very short time, varying from a few minutes to several hours. But if the hæmorrhages are of small extent, they may pass into the chronic state, and give rise to permanent clinical results. Hæmorrhages breaking through into the fourth ventricle, in the majority of instances, give rise to convulsions, either clonic or tonic—sometimes passing from one variety into the other. But even under these circumstances it is not true that this particular symptom is always present, any more than that this particular lesion is the *conditio sine qua non* of its occurrence. Another fact worthy of notice in this connection, is that if recovery does take place, the mind is in most cases more or less affected, as regards the emotional nature. The person is apt to take a very gloomy view of their case, easily affected to tears, and as readily breaking out into the most hilarious laughter; laughing or crying for the least or no adequate cause, in many instances in a very hysterical manner.

The following case occurring recently to me, and on account of the rarity of the disease, and the many interesting points connected with it, has led me to take this mode of placing it on record:

I was called early on Friday morning, Oct. 27, 1876, to see Mrs. Anna McG., Irish, aged 68 years, who has been suffering for a number of years from disease of the aortic and mitral valves, producing a loud murmur to be heard at the distance of several inches from the chest; also atheromatous condition of the arteries. Found her this morning in the following condition: The face drawn to the right side, internal strabismus and ptosis of the left eye, and slight ptosis of right. The tongue was protruded with great difficulty, and to the left; she was wholly unable to form a single intelligible word, although she made every effort to do so, and deglutition was almost impossible. The right arm and leg were completely paralyzed; sensation was somewhat blunted throughout the affected parts. The left limbs showed a marked deficiency in power of coordination. On auscultating the heart, found it beating regularly, and with a great change in the murmurs, from having been so loud and distinct before, they were but just audible now. She appeared, as far as I could ascertain under the circumstances, to retain all her mental faculties. The cough and dyspnœa which previous to this attack were at times very severe, entirely gone. She complained, by motions, of severe pain in the head and arm, but otherwise seemed quite comfortable.

P. M.—She is now able to articulate a few words very indistinctly.

There being complete retention of urine, used catheter. Up to this time she had no treatment except stimulants in guarded doses.

Oct. 28.—Patient feeling better this morning; slightly apparent improvement in the facial paralysis; power of speech improved, and after much difficulty I succeeded in obtaining the following history: On Thursday had done a hard day's work (washing), and not feeling well towards evening, having some discomfort in her head, not an ache, but a sensation of numbness and oppression, lay down and took a nap; arose between 9 and 10 P. M., ate a light supper, when she again returned to bed, and had not been there more than five or ten minutes when she felt a very severe pain in the left parietal and occipital regions, accompanied by what she afterwards described as a sound as if a pistol had been fired close to her ear. The pain rapidly extended into the left side of the face, and down the right arm and leg. She attempted to make an outcry for help, but found herself unable to utter a sound. She lay in this condition the remainder of the night, until people living in the house found her as above about 6 A. M. She claims not to have lost consciousness at any time from the commencement of the attack until she was found the next morning.

Oct. 29.—She complains of severe pain in hepatic region this morning; the bowels are greatly distended with flatus; gave her hydr. chlo. mite gr. x, followed by jalapæ co. pulv. ʒi. The flatulence increased until towards night, when she passed wind freely per ano. with much relief. In the evening gave an enema, but without a movement of the bowels resulting.

Oct. 30, A. M.—Patient more comfortable. Flatulence much less than last evening; slight improvement in face; speaks and swallows more easily; bowels not moved yet; to have enema repeated, which being unsuccessful, ordered pil elaterii (Clutterbuck's) gr. ½, jalapæ co. pulv. gr. xxiv later in forenoon. Dr. Jas. E. Barbour saw her in consultation.

P. M.—Patient uncomfortable and nervous; gave a slight anodyne, and to take hydr. chlo. mite gr. xx at 8 P. M., followed by sennæ ext. fl. ʒii. About 10 o'clock that evening had a small movement of bowels; somewhat relieved.

Oct. 31.—About the same; slight improvement in face and speech. The water drawn this morning is small in quantity, dark, and contains blood. To take digitalis inf. ℥ss potass. iodide gr. v. t. d. Sennæ ext. fl. ʒii repeated.

P. M.—Bowels freely open; patient much relieved; urine more abundant and less bloody; appetite fair.

Nov. 1.—Consultation with Dr. Samuel Lynes. Improvement in face and speech; otherwise same as last evening; medicine continued.

Nov. 2.—Urine passed and movement of bowels naturally for the first time; much improved; patient has apparently for her, the normal control of the vocal organs. The deformity of the face is daily improving. Medicine continued.

Nov. 6.—Up to to-day patient has been totally unable to make the slightest movement of her right arm or leg. This morning finds she can carry the arm up and across the chest, and faintly clasp my hand. The improvement in the leg was not so marked, but she could slightly flex the knee. Increased the potass. iodide to gr. vii ss t. d.

Nov. 8.—Improvement of flexor groups of muscles both in upper and lower right extremities. No improvement in the extensors. Her mind is still childish, fretful, and querulous. Gave her chloral hydrate gr. xv. about 11 P. M., as she was nervous and wakeful.

Nov. 12.—Not having passed urine, used catheter, removing about 0iss of healthy urine. Patient fretful; ordered quin. disulph gr. iii t. d.

Nov. 13.—Complains of vesical tenesmus; cath. used. To have the bladder washed daily with the following: Glycerine ʒ ii, sodæ biborate ʒ i, aqua ʒ iii, font. to aqua fero. ʒ iv, and to take liq. potass. m xii, hyosciami ext. fl. m. iii, ʒ ii m., largely diluted t. d.

Nov. 19.—Was obliged to use cath. for some days. Paralysis gradually diminishing in both upper and lower extremities. She is able to walk across the room with slight help; receives much relief from the vesical injections. The occasional washing out of the bladder was continued up to the middle of January, 1877, when all vesical trouble disappeared. She was then taking strychnia in small doses. In February, 1877, I employed the interrupted current, but found all the muscles responded well, so did not continue its use.

Jan., 1878.—Improvement has been very gradual up to this time, with perhaps little or no change for the last six or eight months. She is able to walk about the house and on the street for a few blocks; sews, knits, and engages in other light domestic employments. The facial paralysis not as much improved as the extremities, and the arm less than the leg. The tongue has a strong inclination to the left. The strabismus not at all improved. She still wears the left eye covered, complaining of double vision, etc. The strength is, as roughly estimated, about one-half in the right limbs as compared with the left. Her emotions are entirely without control; she is easily moved to tears, and as readily gives way to almost uncontrollable laughter. The watch is heard about twelve or fourteen inches from the ear on the right side, and only five or six on the left. The cough and dyspnœa has returned to a great extent, and is very troublesome at times. The cardiac murmurs are but faintly audible, not having returned as before the attack.

Feb. 27, 1878.—Sent for to see patient again this evening; find her suffering from pain; referred to the left parietal and occipital regions as before; there was also pain over the solar plexus and in the right extremities. She was in a state of intense mental excitement, having a dread that some dire and indescribable calamity was about to befall her. Her mind would then wander off, and she would talk incoherently; the paralysis a little more marked than in January; the voice slightly thicker; but the dyspnœa and cough, which was quite severe before this

attack, again relieved. No change in cardiac complications. Treatment, brisk cathartic, quiet in bed with the bromides. Next day patient was better.

April, 1878.—Patient has recovered from her illness in February, with slightly increased, as she terms it, "stiffness" throughout the previously affected muscles. The paralysis is certainly more marked than before.

This case is of peculiar interest on several accounts:

First. Because of its rarity.

Second. From the extent of nerve distribution implicated.

Third. The result—partial recovery.

Fourth. Etiology.

I pass the first as it certainly needs no discussion here to prove its rarity. It has been regarded by some neurologists as among the curiosities of neuropathology. Nothnagel places hæmorrhages into the pons as fourth, compared with other intercranial points, but places cases of complete hemiplegia alternans among the rare exceptions. In the second place this case is certainly remarkable, on account of the number of encephalic, as well as spinal nerves severed by the morbid action, including as it did the trifacial, abducens, facial, auditory, glosso-pharyngeal, and hypoglossal, in fact all the cranial nerves having their origin in part, or wholly from the pons varolii, or the fourth ventricle.

And third, in view of the extent of the paresis as just considered, I think we can certainly put this case down as one of the rare exceptions given by Nothnagel, quoted above. It certainly is but rarely that even in cases of cerebral lesions occurring in less vital localities, for I certainly think we can locate the lesion in this case as in or upon the pons varolii without the least hesitation, if there be any reliance to be placed upon localization of cerebral lesions by clinical symptoms alone, that recovery takes place to so great an extent as seen by the above report. The patient, for one of her age, enjoys comparative health and comfort, employing herself with light work, entirely able to dress and care for herself, with all the functions of animal life as well or better performed than they are in the majority of persons at three score years and ten.

Lastly, etiology. Dividing this into the four varieties of lesions of bloodvessels of the brain, resulting in paralysis, we have, 1, embolism, 2, thrombosis, 3, rupture of vessels, or miliary aneurisms, 4, meningeal hæmorrhage. At first thought from the preëxisting cardiac disease, we should be inclined to ascribe to embolism the responsibility of being the sole cause of the paralysis in this case.

But let us see. An embolus from anatomical reasons usually follows the course of the left carotid and middle cerebral artery, and lodges in the artery lying in the fissure of Sylvius. This is the common course of migratory plugs to the brain; nevertheless, this does not always follow, as nearly all the cerebral arteries have at different times been found occluded in this manner. Even cases of bilateral embolism have been seen. In this case, certainly, the closure of no one vessel would, in the region of the pons varolii, have been adequate to account for the clinical phenomena.

For embolism to have produced them we should have to assume the rare occurrence of the occlusion of both vertebral arteries, which in all probability would have been speedy death. Again, a large majority of cases of cerebral embolism are fatal within a short time of the attack. And where they are not, some form of softening almost invariably follows in the district supplied by the occluded vessel, of which there are no symptoms in this case. On anatomical grounds alone, embolism appears to be inadequate to alone account for the clinical phenomena of this case. But I would not say that it did not enter into its pathology, and perhaps to an important extent, but only that it alone is insufficient to account for the result. The probability of thrombosis and meningeal hæmorrhage being the cause is so small that it hardly seems necessary to take them up in detail. Third, rupture of cerebral vessels or miliary aneurisms, adopting the law as laid down by Nothnagel, that the most important predisposing cause of cerebral hæmorrhage consists in disease of the cerebral vessels, especially the arteries, and recognizing the fact that miliary aneurisms which Charcot and Bouchard were the first to show as occurring almost regularly in cases of so-called spontaneous hæmorrhage, having discovered them in twenty-seven consecutive cases of cerebral hæmorrhage.

The hæmorrhage takes place through the rupture of these formations. They are almost never seen until the fiftieth year, and increase rapidly in frequency after that time as age advances. This, together with the fact that the vessels of the pons varolii are one of the most frequent seats of this disease, gives strong presumptive evidence, amounting almost to probability, that it is in the rupture of these minute aneurisms we are to look for the principal factor of the clinical phenomena observed in this case, bearing in mind that the patient is suffering from disease of arteries in other localities.

The only explanation satisfactory, and that but partially so, of

the pathology of this case is this, in brief: That an embolus was lodged somewhere in the circle of Willis, perhaps before she arose from her nap, as she then complained of discomfort in her head; and afterwards, owing to the disturbance of circulation in the brain induced by presence of the emboli, and the increased tension in the vascular system, caused rupture of these miliary aneurisms, and the extravasation of blood into the pons varolii, which, breaking through to the surface, formed a clot under the membranes, causing the extensive nerve destruction by compression, as we see that those nerves springing directly from the pons, or passing through this organ, are the ones most severely implicated, while others more remote escape with less injury. And the probability of this being the case is strengthened by her recovery from the previous attack, and the subsequent sickness, which, without doubt, was a slight recurrence of the cerebral hæmorrhage.

A CONTRIBUTION TO THE TREATMENT OF EMPYEMA BY ASPIRATION, AND, WHEN NECESSARY, BY FREE INCISION.

Jas. E. Barbour, M.D., Norwalk.

Although it has now become a well established rule to resort to thoracentesis for the removal of fluid effused into either pleural cavity as the result of the inflammatory process, whenever it is evident that such fluid is not being rapidly absorbed, or where there is much embarrassment of the respiratory or circulating functions, yet it is to be feared that in general practice this simple operative procedure is still often regarded as a "*dernier ressort*," and delayed too long, so that not only irremediable danger occurs to the lung, and it may be indirectly to other of the viscera, but a sero-albuminous (or fibrinous) fluid becomes converted by increase of cellular elements into a more or less purulent one, which is not nearly so likely to be permanently relieved by simple aspiration. As of interest in this connection, the following cases are submitted:

Case 1.—June 14, 1876, I was called in some haste to see Willie H—, male, aged six years, a delicate child; mother of phthisical family. Mother states that eight weeks previously he contracted a severe cold, which soon seriously affected his breathing; had a dry cough, and more or less fever. In a day or two his symptoms began to abate, and he was

thought to be slowly improving until about ten days previously, when cough and dyspnœa became more distressing, and during the past night he was thought to be dying. He had been under the care of an irregular practitioner, who called his disease "chronic lung fever." On my visit I found the child supported in an upright position upon pillows, with marked orthopnœa, pale in countenance, with somewhat of a leaden cast, an anxious expression, and lips somewhat livid, as well as his extremities, while the latter were quite cool; pulse 152, feeble; temp. 97.5° Fah. in axilla; resp. 58, costal and shallow; heart displaced to the right apex, apparently beating under right nipple, but beat diffused; physical examination of right side showed exaggerated vesicular, but shallow respiration while the left side was completely flat upon percussion, the flatness extending to the right side of the sternum; vocal fremitus absent, while somewhat distant, but distinct broncho-vesicular respiration could be heard over upper three-fourths of chest posteriorly, with slightly marked bronchophony; anteriorly the respiratory murmur was amphoric in character. The intercostal spaces of left side bulging slightly. Sending for the aspirator while making a call in the vicinity, in about half an hour, I inserted a fine needle, No. 2 of Dieulafoy's aspirator, into the fifth intercostal space in the axillary region. This was immediately followed by a free flow of pus, and about three pints, by estimate, were withdrawn; no accurate measurement was made. Six hours afterward the child was sleeping quietly, and respiration 30, with much better color of face, and warm extremities; pulse 120; the temperature rose to 99.6° Fah.

The child improved steadily under a liberal diet, with ferruginous tonics; but on the 12th the physical symptoms of reaccumulation were becoming so apparent, although constitutional disturbance was not especially marked, that his chest was again aspirated, and 24 ozs. of pus more serous in character were removed. From this date his general health improved more rapidly, and three weeks afterward, on the 1th of July, some retraction of left chest was visible; chest resonant in front over upper half, but dull over entire back; breathing throughout chest cavernous, save at the very base; more feeble and distant posteriorly; vocal fremitus marked over upper half chest anteriorly and slightly posteriorly, while at lower half it was absent, and flatness on percussion existed. This condition persisted for a few days, when dyspnœa becoming more marked, the aspirator was again used, and 10 ozs. of pus, more greenish in hue, were withdrawn. The dyspnœa lessened, and the child generally improved.

Two weeks subsequently as dullness, with absence of vocal fremitus, persisted in the lower half of the chest and in the axillary region, with the usual dullness in the back, while modified respiration existed; although the patient was doing well, in order to ascertain if pus still existed in the pleural cavity, a hypodermic needle of fair size was in-

serted into the sixth (6th) intercostal space, and a little pus withdrawn. It was sweet and natural in appearance, but quite thick. As the general symptoms of the patient were so good—pulse 90, regular, and increasing in strength and volume; temperature normal; skin soft in feel and becoming ruddy in appearance, while the respirations were 24—it was thought better to avoid aspirating again until specially indicated, trusting that the remaining pus would part with its fluid, and the cellular elements undergoing fatty degeneration be absorbed or otherwise rendered innocuous.

Six months afterward the child was in good health, with slight retraction of left chest, with dropping of left shoulder, and some dullness in axillary region at lower part and posteriorly, while respiratory murmur was less rough.

Case II.—October 15, 1876, I saw J. H. B., male, aged 4½ years, of healthy parentage, save that during the past few years the father has injured his health by alcoholic dissipation. Child has not been strong since an attack of measles two years previously. Three months ago he began more decidedly to fail in health; his appetite became capricious, and he gradually lost flesh; appeared to be disturbed in breathing, especially after exertion, but had little, and only occasional, dry cough; slight febrile movement in the evening, but not marked, it was thought. A physician who saw him ordered an emulsion of cod-liver oil, and for awhile he seemed to improve. For the past three days dyspnœa has increased. At this date he presents a preternaturally aged appearance, as seen often in constitutional syphilis. The teeth are natural; never had any eruption save that of measles; nor mucous patches. Respiration short and frequent, and when lying down, with head and shoulders elevated, quite labored. Pulse frequent and feeble, but rate and number of respirations not taken. Temp., 98.5° Fah., in axilla. On physical examination, left chest normal, save somewhat exaggerated puerile resp.; right dull on percussion anteriorly, save in infra clavicular region, near sternum, and flat upon percussion posteriorly, except along upper two-thirds of the inter-scapular region; absence of vocal fremitus.

Respiratory murmur, bronchial, and broncho-vesicular, with—especially anteriorly—an amphoric character; marked pectoriloquy in front. Diagnosis of sub-acute pleurisy made.

On the 17th the breathing became more disturbed, probably owing to failure of heart-power. As the parents objected to the use of the aspirator, a large needle of a hypodermic syringe was introduced, after spraying the skin with ether, and pus withdrawn. The aversion of the parents to aspiration of the chest was then overcome, and on the following day (18th) the operation was performed, and twelve ounces of greenish yellow pus were removed, to the immediate relief of the little patient. The child, on the second and third days after the operation, had an evening elevation of temp. of 2° Fah. Three grains of quinine, at 9, 12, and 3

o'clock daily, were ordered, and soon reduced to one dose daily, while ferruginous tonics, fresh air, and a good wholesome dietary insisted upon. Recovery was rapid. No reaccumulation of pus occurred. The lung gradually expanded, while dullness in infra axillary region posteriorly continued for some weeks, probably from thickened pleura.

Although the family have removed from Norwalk, I heard indirectly this winter, through a relative, that the child is in good health—even better than for some months prior to its illness.

Case III.—April 4, 1877, in consultation with Dr. Sands of Darien, I saw Geo. B., aged 9 years, of healthy parentage, and who, up to date of this illness, had been in excellent health. Scarlatina had lately prevailed in the family; the patient not attacked. Eight days previously, after a chill, symptoms of pneumonia developed themselves in the right lung. From this he was recovering, when, on the 1st instant (three days before), he began to complain of great pain in the left side and shortness of breath. These symptoms were relieved by hot applications, but during the preceding night (3d) the dyspnœa and fever began to increase. I found the child sitting upright in an easy chair, with short costal respirations, and complaining of pain in attempting to take "a full breath." Cough short and hacking; pulse 140, sharp and regular; temp. in axilla 103.5° Fah.; resp. 38; tongue furred but moist, while the skin was preternaturally dry.

On physical examination, signs of resolving pneumonia were evident in right chest; lower half of left chest flat upon percussion, with absence of vocal fremitus; bronchial respiration in this region, while broncho-vesicular respiration existed just above the level of the dullness, and throughout remainder of chest rough in a less degree. Diagnosis of left pleurisy with effusion was made, with probable pneumonia of lower lobe of lung, as in children, quite a large effusion of fluid in pleural cavity, with absolute flatness on percussion; does not, at least as a rule, obliterate the respiratory murmur, or cause it to assume so bronchial a character. The treatment consisted in oiled silk jacket, lined with cotton batting (cotton poultices); quin., gr. v, v.m and r.m.; with drop doses of fr. aconite root; opiate p. r. n., and such food as could be easily assimilated.

I did not see the patient again until the 13th, when I ascertained that since my first visit his sputa had been rusty, but not for the past three or four days; complaining very little of pain, but dyspnœa marked; had a fair appetite, and slept well; countenance a little anxious in expression; pulse, 104, small and weak; temp. 100.4° Fah.; tongue and skin normal; right chest normal, save puerile respiration. In the left the evidences of effusion had somewhat increased; respiratory murmur over seat of flatness; broncho-vesicular somewhat distant but clear. The addition of a little alcohol to the diet was recommended, with use of syr iod. iron, and to continue the quin. at bed-time. It was decided that in

ease the effusion did not begin to diminish in a few days, thoracentesis should be performed.

On the 24th I again saw the case, and learned that during the past three days the patient had irregular chills, with an evg. elevation of temperature.

At the time of my visit (noon) the temp. was 101° Fah.; pulse 100, small, but somewhat stronger, it was thought, than at previous visit; chest showed an increase of fluid in left pleural cavity, extending apparently to second rib, with decided broncho-vesicular respiration throughout chest, save at small space at base of cavity; voice bronchial; intercostal spaces bulging, and chest measurement increased, with displacement of apex beat of heart one inch to right of sternum. The dullness on percussion extended well to the right of the sternum anteriorly. Aspiration was advised, and early the following morning (25th), assisted by Dr. Sands, a small aspirating needle of Dieulafoy's apparatus was introduced into the fifth intercostal space at junction of axillary and infra scapular regions left side; 40 ozs. of slightly greenish pus were removed, when the patient began to complain of constriction of chest and incessant coughing, and the needle was withdrawn. To have quinine A.M. and P.M., syr. iod. iron, and good food.

On the 28th his appearance was much improved; countenance brighter; much less dyspnœa; no cough of consequence; pulse 90; temp. 99.7° Fah.; chest showed some reaccumulation of fluid in lower third. This remained about stationary until the 3d of May, when it began to accumulate more rapidly, and on the 7th it filled about two-thirds of the chest cavity. The cough meanwhile became quite harassing.

Owing to the possibility of having to make a permanent opening, and considering the lower posterior part of chest—as recommended by Dr. Bowditch—to be the more favorable site for the incision, and as by the same authority "a point in the back between the eighth and ninth or ninth and tenth ribs on a line with the angle of the scapula," is recommended, with certain restrictions, as the preferable point for thoracentesis, I introduced the aspirator needle in the ninth intercostal space on the line above indicated, and over one and one-half inches above a horizontal line, below which respiration could be distinctly heard in the opposite lung, and drew a little blood, but no pus, while the patient complained of severe pain about the lower part of chest, and especially at the epigastrium. The needle was withdrawn, and the little wound hermetically sealed, a hypodermic of morphia administered, and the patient made comfortable in bed. The pain continued slightly for a few days, and the entire side remained quite sensitive; there was slight rise of temperature for two days. The cough was checked somewhat by the opiates.

On the 14th, the patient having recovered from the disturbance of the 7th, the dyspnœa and cough increasing, he was aspirated near the site of the first puncture and 52 ounces of pus withdrawn. After the

first effort of the lung expansion with its coincident coughing had subsided, in 2 or 3 hours, there was scarcely any cough for a week, and the boy was about the house and yard. After this the cough and dyspnœa began to increase slightly day by day until the 29th, when his chest was again aspirated and 34 ounces of pus of darker hue and somewhat greater consistency was removed. The operation was repeated upon the 14th and 30th of June, 12th, 20th, and 28th of July, August 3d, 10th, and 18th, each time with relief to the disturbing symptoms. The interval between the aspirations lessened, as when marked accumulation of pus had occurred, the dyspnœa and coughing so annoyed him and so wore upon his vitality, that it was thought expedient to operate often in order to conserve his strength. The day after each aspiration he was able to be about and out of doors. The parents objected to a radical operation as he so much improved under repeated tappings. As I left for the mountains soon after the last recorded aspiration, the patient passed under the care of Dr. Bohannan, who continued to aspirate the chest once in from 5 to 8 days, and after some 5 weeks made a small incision in fifth intercostal space over the site of the tappings, which was kept permanently open, the chest washed out twice daily with weak solution permanganate of potash, and when on my return in October, I again saw the little fellow, very little discharge of pus was taking place, and about four weeks afterward the opening had entirely healed. The lung expands well, filling apparently the entire cavity in its present condition, respiration normal. Dullness marked posteriously and in infra axillary region. Decided retraction of chest, measuring less than opposite, and drooping of shoulder. This patient's chest was aspirated by me ten and subsequently by Dr. Bohannan nine times; in all nineteen times before the final incision was made. In a letter dated May 20, 1878, Dr. Bohannan writes: "the proposed incision was made on the 24th of Sept., and on the 21st of Oct. the wound had closed. From that time he has grown very robust and strong; so much so that you would probably not now recognize him.

Case IV.—July 31, 1877, I was called to see Mr. L. D., of Albany, N. Y., who was visiting his brother in South Norwalk, Conn. His wife stated that three months previously he had "typhoid fever with pleurisy" of right side, this was followed by "water about the heart," and still later by an "abscess of the left lung." He was brought here for change of air, owing to the latter difficulty, but had grown worse. He had expectorated purulent matter until three days previously, since which, although harrassed with cough, he could "raise scarcely anything," was unable to lie down in bed, and was failing decidedly in strength. As he had been under homœopathic care, his physician since his arrival in town prescribing by letter, I was called simply to give my opinion as to his ability to bear the journey home to die. The patient was leaning forward, his head resting upon his hands and arms placed on the back of a chair in front of him. He appeared to be a

man of medium stature, large chested, much emaciated, aged 48 years, commercial traveller by occupation. Pulse 140, small and weak. Tem. (Evg.) 104.2° Fah. Tongue slightly furred, skin soft and open. Physical examination of chest showed normal percussion and exaggerated vesicular respiration through the left lung, the supposed seat of abscess. Upon right side there was perfect flatness upon percussion save at summit of chest, and along upper part of spine posteriorly when dullness was marked but not flatness. Absence of vocal fremitus. Enlargement of chest on that side with inclination to bulging of intercostal spaces. Some bronchial respiration above spine of scapula and just below clavicle in front. Otherwise no respiratory sounds. Heart was displaced to the left. From the physical examination conjoined with elevated temperature and general appearance of debility, and the arrested profuse purulent expectoration diagnosis of empyema, and aspiration of chest advised. This was agreed upon early next morning. Dr. Lynes corroborated the diagnosis. I passed a medium size aspiratory needle into chest in sixth intercostal space in posterior portion of axillary region. *Ten and one-half pints of pus* were withdrawn before the patient complained of any constriction, when finding also that but little remained, the needle was withdrawn and the puncture sealed. On the evening of the 2d his temperature had fallen to 100.5° Fah., and he had a comfortable day. Able to lie upon the back for the first time in several weeks. Appetite began to improve and patient gained in strength, while the cough was very slight accompanied by some muco-purulent expectoration. By the 5th the fluid had slightly accumulated, and on the 6th and 7th he complained of very disagreeable odor and taste of his sputa, and the cough had materially increased. Evening temperature rose to 102°, and he perspired freely at night. On examination of chest, physical signs of pneumo-hydrothroax (pyo-pneumothroax) were found to exist—the Hippocratic succussion sound was very well marked. He had been previously informed that a radical operation would probably be necessary, but that it might be done at his own leisure, and was now told that it must not be delayed long. He decided to have it performed in Norwalk. As preliminary thereto and for relief of immediate symptoms, on the 8th the aspirator was again used, and 2½ pints of sero-pus, quite offensive, and much more fluid than the pus of the former tapping, were removed. He was greatly relieved; could lie upon the affected side; pulse increased in force, and diminished in frequency; temperature dropped, and night sweats ceased; appetite also improved. On the 11th of August, assisted by Dr. Samuel Lynes, the patient being fully anesthetized by Dr. Burke and placed in a sitting posture, with back near the edge of the bed, I made a free incision 3½ inches in length in the ninth intercostal space down to the pleura which was found thickened and adherent to intercostal muscle. A small puncture was then made, and pus freely issuing from the opening it was carefully enlarged to about two inches in

length. The discharge was very offensive and accompanied by many shreds and bits of coagulated fibrin. The pleural cavity was then washed out with warm salt water containing a little carbolic acid, such as is recommended by Dr. Peaslee for use after ovariotomy when necessary. The upper surface of the diaphragm could be felt by the tip of the finger, introduced into the opening. A probe passed in eight inches and directed diagonally upward met with no resistance. Vents of oakum soaked in carbolic water were introduced into either end of the incision, and a large wad of oakum placed over the opening, and the binder applied simply.

In the evening he had rallied from the operation, and on the following morning his temperature was 99°, *i. e.* lower than at any previous time. From this time he steadily improved, the lungs expanding day by day. His morning temperature ranging from 100° to 101°, with an increase in evening of ½ to ¾° Fah. No night sweats; cough lessening; appetite good; resting quite comfortably at night, and walking about a little during the day. He complained at times of annoyance in hearing, and feeling the air from without, enter the pleural cavity with each inspiration, but a large mass of oakum to absorb the drainage and cover well the opening with a firm bandage diminished this in a measure. Twice daily the cavity was washed out with the solution above mentioned by means of an ordinary ball syringe and stop-cock connected with a soft rubber catheter, each time two applications being made and allowed to drain away before bandaging. I was at first afraid that the prolonged stay of the pus in chest might have already laid the foundation for caseous pneumonia and perhaps tuberculosis, but on the 17th the morning temperature fell to 99°, and subsequently to 98.8° Fah. with an evening rise of half a degree or less. About a week from this date Mr. D. returned to his home in Albany. His improvement was steady, and some few weeks ago I was informed by his brother that his wound had closed, and that he had resumed his occupation of a commercial traveller, considering his health fully restored.

As to the practice of aspiration, the foregoing cases simply corroborate what is now so universally recognized; the innocuousness of the operation, the painlessness with which it may be accomplished, its applicability to infants as well as adults, and the great relief that immediately ensues. The cases also assist in showing that even in empyema in children, aspiration, or even repeated tappings, may be hoped to be not simply palliative, but curative, by diminishing pressure on the absorbing surfaces, thus permitting more ready absorption, and by lessening general systemic disturbance, or by comfort gained, causing improved hæmatosis. The system of the patient thus presents a condition more favorable to

the absorption of the more fluid portion of the pus which may remain or afterwards accumulate, provided it is small in amount, while the more solid portion may undergo fatty or calcareous degeneration in the base of the pleural cavity. Ringer* says: "It may be sufficient to remove part of the pus (in children), and the remainder will be absorbed." The above cases corroborate this statement.

Contrary to the view formerly held, it is now thought by many authorities, especially on the continent, that primary empyema, if it ever occurs, is exceedingly rare; but that a simple sero-albuminous effusion, under certain conditions, is more or less rapidly, by increased cell proliferation, converted into a purulent one. Says Frærtzel,† of the Berlin Charité: "We must now regard it as an established fact that primary purulent pleuritis is of extremely rare occurrence. In almost every case the effusion is at first fibrino-serous, and it is during the subsequent course that it becomes purulent, and this may occur as early as the first week." Although it has not been clearly shown why a pleuritic inflammation will furnish fibrin and serum in one case, which shall, for a long time at least, show no tendency to become purulent, while in another instance the process, if not purulent *ab initio*, as in secondary pleurisies, very soon shows a rapid increase in cell elements; still, clinical facts as well as microscopic observation show that this is due rather to a difference in the *type* of the inflammation than in the inflammatory process. All sero-albuminous (fibrino-serous) effusions show some leucocytes, and their more or less rapid increase marks the difference in the grade of the inflammatory action. It may be that some pleural membranes are of themselves more tolerant of irritation, of fluids in excess, or of pressure. The vitality of some patients may be more readily depressed by the irritation, as also by the mechanical effects of large fluid accumulations. The first case is of interest here: the rise of temperature after aspiration—97.5° to 99.6° Fah.—was probably due to the ability of the little patient to inspire a larger amount of air, and so to increase the heat-producing function which was held somewhat in abeyance by the loss of respiratory power.

It is fair to suppose that the distress of pent-up fluid, the anorexia, disturbance of sleep, continued febrile movement in some cases, together with the obstruction to due arterialization of the blood, with the constant wearisome dyspnœa, may bring about in

* Practitioner, vol. ii, p. 108. † Ziemssen's Cyclopædia, vol. iv, p. 612.

the patient a change of constitutional vigor which shall so alter the grade of the inflammatory process as to give rise to a more or less free production of cellular elements, and thus the simple sero-albuminous fluid becomes converted into a sero-purulent one, and by delay in aspirating the entire pleural surface may become an extensive pyogenic membrane. But whether the development of empyema be due to constitutional change in the patient, or to some primary local action in the pleura itself, the practical point is to *aspirate early* in cases of acute or sub-acute pleurisy with effusion.

Bowditch, in his letter to Dr. Abbott, says he never operated too early, while he has had cause to regret delay.

Loomis says: "In any case of pleurisy when the fluid accumulation remains stationary for one week, or is increasing after the cavity is half filled with fluid, . I would advise to aspirate the chest."

As to the point at which to puncture the thorax, opinion is somewhat divided. Owing to the writings of Trousseau, Quincke, Traube, and others, most European physicians appear to follow Laënnec's advice, and select some place between the mammary and axillary lines above the sixth rib. Fraentzel favors tapping in the fourth or fifth intercostal space. Loomis recommends a point in the fifth or sixth intercostal space, at junction of the axillary and infrascapular regions, while Bowditch recommends "a point in the back on a line with the angle of the scapula, and between the eighth and ninth, or ninth and tenth ribs, and at least an inch and a half above a horizontal line drawn through the lowest point at which the respiratory murmur can be distinctly heard in the opposite lung." Fraentzel objects to this location, owing to the thickness and tension of the muscles on the posterior surface of the thorax and difficulty of accurately locating the intercostal spaces; also the liability of thrusting the needle into a layer of fibrin which has accumulated in the base of the pleural cavity owing to the position of the patient, and finally, on account of the danger of occasionally wounding the diaphragm.

This accident occurred in the third of the cases above reported, although the precautions advised by Bowditch were carefully followed. According to Gray on forced expiration, the diaphragm in the left side is posteriorly on a level with the ninth or upper border of the tenth rib, and descends from one and a half to two inches on inspiration, but with the pleural cavity distended with pus, I thought that Bowditch's rule might be safely followed. In

case the operation has been delayed until the effusion has become purulent; or when pus has existed from a very early period of the inflammatory process; the local and general pathological changes, as well as the mechanical disturbances which accompany and follow empyema, also enforce the necessity of early and, if necessary, frequent aspiration of the chest, and when required, a radical operation. As to the time at which this should be performed, the general opinion appears to be that it should not be attempted until after at least one tapping, and the pus shows a tendency to rapidly re-accumulate. Even then it may be in some instances safely delayed, provided the patient is gaining in flesh and strength in the intervals of aspirating. Case three was aspirated by me eleven times, and by Dr. Bohannan of Darien, eight times, in all nineteen times, before the final incision. Yet, during the delay, the boy increased in strength and weight. The increased cough and febrile movement which ensued on the re-accumulation of pus immediately ceased upon its withdrawal. He was thus in better condition for the final incision after the delay than at an early period of his illness. The *prolonged* delay indeed was not necessary, and less risk of cheesy pneumonia and phthisis, and perhaps of amyloid degeneration of the viscera, would have been run had the operation been performed as soon as it became evident that this would finally be necessary. The hot weather and wishes of the parents were, however, considered. In children it is evident that permanent success may be hoped for by repeated tappings; but when a very rapid accumulation of pus after removal continues, it is probable that free drainage will be necessary, with disinfecting applications to the pleural cavity. As to the site of the permanent opening, that suggested by Bowditch, low in the back, on a line with the angle of the scapula, appears to possess advantages over that in the side or in front, as formerly practiced. As to drainage, the same authority having tried silver and rubber drainage tubes, as well as other contrivances, favors a free incision, as less likely to lead to accumulation of the more solid portions of the pus and consequent decomposition: and this mode of procedure appears to be gaining ground.

As to statistics in cases of empyema, Dr. Loomis says that "among empyemic patients in whom spontaneous openings occur, about one in five recover, while among those in whom artificial openings are made, about one-eighth recover." This statement probably has reference to hospital cases, and includes secondary

cases occurring during pyemia and septicaemia. According to Dr. Hillier of London, of seventeen cases of empyema in children, "in six there was spontaneous opening or pointing of matter requiring an operation, of whom five recovered with permanent fistula, the other died." In eleven cases paracentesis was performed; of these six recovered completely, one had a permanent fistula, and four died. Dr. Hillier's plan is to make the opening under water. The cases were reported in 1867.

Of Dr. Bowditch's twenty-four cases of thoracentesis in empyema, eight recovered, nine were relieved, and seven died: the cases include adults. Dr. Ringer of London, reports five cases occurring in children, all of whom recovered. Thus it is evident that this simple operative procedure is eminently successful in children.

To Prof. Bowditch, of Boston, is due the credit of first introducing to the medical profession the principle of pneumatic aspiration of the chest. The mechanical details have been much improved of late.

With the aspirators now at our command, and with increasing familiarity with the details of the operation; its early, and, when necessary, repeated employment, it is believed that the statistics of the future will show a great gain in the ratio of successful to unsuccessful or only partially relieved cases.

Finally, a point in physical diagnosis may be alluded to, namely, the decidedly amphoric character of the respiratory murmur, especially over the anterior portion of the chest, in one case, and the well-marked bronchial and broncho-vesicular character of the respiratory murmur transmitted through the effusion in the pleura in the cases of children, compared with its entire loss or but feeble and distant character in adults under similar physical conditions.

WINDHAM COUNTY.

To Chairman of Committee on Matters of Professional Interest, etc.:

Dear Sir,—I regret my inability to furnish you with more in the way of records of important cases of professional experience from this county, and that many of our members have omitted to reply even to the questions of your circular.

Accepting as apology—in some measure—the fact of the almost perfect exemption of the county from any serious epidemic, while ordinary diseases have been far less prevalent than in many previous years; yet it is probable that in the experience of none have there been wanting cases, the faithful record of which would contribute facts in pathology or therapeutics of general interest and profit.

To say, therefore, that "the profession of this county are men of great experience and wisdom, but do not find time to commit their thoughts to paper," might be offering a reproof, rather than an apology for neglect of obvious duty.

The diseases chiefly noticeable in this section, and more or less generally throughout the county, have been those due to sudden alternations of temperature; and neuralgias and diseases of the respiratory organs have held prominent place, especially during the winter and early spring months of 1877–78. These last have presented more of an epidemic character than any other disease, commencing as influenza of unusual severity, and in some cases terminating without complications; in others rapidly passing into capillary bronchitis; and in yet others, to the involvement of lung tissue. All have proved amenable to treatment except the latter class, when affecting subjects of great age and feeble vitality.

Typhoid fever, in the autumn and winter, prevailed to considerable extent throughout the county, though of much less malignant type than formerly, and with relatively less mortality. While many cases in this vicinity *seemed* reasonably attributable to such morbific agency as might be found in bad drainage and sewerage, or imperfect ventilation; yet in no instance did all the members of a family suffer, and the great majority of those living in the same locality were exempt from the disease. In other localities, where the surroundings were unobjectionable, isolated cases of far graver type occurred. Do not such isolated cases clearly suggest the idea that the power of transmission resides in some morbific

agency, to which certain favoring conditions only can give development, potency, and virulence necessary to insure the propagation of the disease? Bad sewerage, drainage, etc., alone, do not seem able to produce the disease by the decomposition of organic or excrementitious substances; for the dirtiest places in these respects are often wholly exempt for years from the disease, and until its introduction from another locality, when a severe epidemic may result.

If, therefore, the question of spontaniety in the circular relates to the generation of the disease *à priori* in the system, independent of some *specific poison*, I would say, in my opinion it never arises spontaneously. I take it, however, as calling for opinion regarding the autochthonous theory of the disease. My observation and study of the subject incline me to the theory of continuous transmission. That no external conditions and surroundings alone suffice to produce the disease, though they doubtless prove an important factor in the problem of propagation, furnishing a suitable nidus for the growth and development of the specific poison, which, thus matured and energized, may be received again into the system by the organs of respiration, or through the ingesta, fluids, or solids which afford a medium of reception.

With Liebermeister, therefore, I would say: "The poison is propagated continuously. It travels from the diseased individual to the localities which are favorable to its growth and multiplication, and from these localities again into the human body."*

Therefore, it is in all cases—though difficult in many instances to trace—always transmitted continuously, and never arising spontaneously. In relation to scarlet fever and diphtheria, I think the question of spontaniety would be answered by a majority of our members in the affirmative—all who have replied to the circular have so answered. None, however, have favored me with any discussion of the subject, but only with the categorical answer.

That they are both propagated rapidly by transmission, and with a directness unknown of typhoid fever, quickly spreading from patient to patient, as highly infectious diseases, epidemics in the experience of us all bear witness. The peculiar morbific agent seems to possess a virulence and energy not dependent on any process of growth and development, during which it is latent, but independent of auxiliary surroundings, going directly from patient

* Ziemssen's Cyclopædia, vol. 1, p. 52.

to patient, fully energized, and operating unconditionally, by virtue of its inherent power.

As in typhoid fever, so also in scarlatina and diphtheria, cases often occur sporadically, which, though of grave character, run their course, and constitute the beginning and ending of the disease in that locality, which may remain for years afterwards free from the disease. The question, therefore, as in the matter of typhoid fever, is suggested: *Can* the poison remain latent for an indefinite time, and after long intervals of absence from a given locality, at length, set free from the environments which held it in latency, go forth manifesting its presence and power in the repetition of effects which so often bid defiance to the best directed skill of the profession? To say that either poison, having its own peculiarities and *modus operandi*, originates autochthonously, finding its breeding-place in localities abounding in the decomposition of vegetable or animal matter, by which the atmosphere is contaminated with the products of faulty sewerage, drainage, and ventilation, would be adopting a theory which the experience of none will sustain and no statistics verify.

Diseases of malarial origin have not prevailed in this county.

Bovine and humanized vaccine virus have been used about equally—the bovine with best results. Dr. Kent reports: "I vaccinated five children with same virus (humanized), two of which did well, but not perfect. The remaining three had a serious time for more than four weeks. The crusts formed were of the size of a twenty-five-cent piece, and discharged profusely an acrid matter, causing a deep, unhealthy ulcer, and in some cases smaller sores formed of the same character—arm very much swollen and painful. Perhaps in two of the above cases there was slight tendency to scrofula."

L. HOLBROOK, M.D., *Reporter.*

A CASE OF INSANITY AND SUICIDE, THE RESULT OF INJURY AND SUBSEQUENT INFLAMMATION. A FEMALE BRAIN WEIGHING FIFTY-NINE OUNCES.

T. Morton Hills, M.D., Willimantic, Conn.

May 17, 1877, I was called to prescribe for Miss Emma Adams, about 28 years of age. I prescribed without seeing her, as she would not allow any one to be called in. Inquiry elicited the following history: She was a person of medium stature, weight 125 lbs., large head, and nervous temperament. She had received a thorough education, and possessed more than average mental ability, with unusual purity of mind. Had followed teaching for an occupation. She fell upon the sidewalk in Brooklyn, N. Y., March 22, 1877, injuring the right knee, and causing a violent headache and a uterine hemorrhage which lasted ten days. She was unable to bear weight upon the limb, and was confined to bed for several days. From severe pain in the knee, and a continuance of the headache accompanied by a flushed face and much heat of head, she slept but little, and was in an excited mental condition.

May 7th she was taken with diphtheria, and was quite sick, although still refusing to see any physician, or to take medicine. After this date her mental irritability and excitability were greatly increased, and on the 17th of May she became markedly insane. She was much opposed to her mother, difficult to control, and inclined to wander from home.

I did not succeed in getting her consent to an interview till the 10th of June. From this date till the 6th of July I saw her frequently.

The treatment consisted in attempts, generally unsuccessful, to exhibit bromide of potassium and arterial sedatives, quinine and ergot, and various forms of counter-irritants, principally dry cuppings.

At no time did we succeed in giving medicine enough to produce any decided effect. July 6th she went with her father to a logging camp in the town of Lebanon, where she amused herself by gathering wild flowers and berries, and in assisting about the quarters. The change seemed to benefit her, the mental excitement gradually subsiding. September 1st the family removed to temporary buildings erected in the woods. Soon after this a clinging dependence upon her mother began to take the place of her former aversion. She showed a lack of memory and order, and a fear of being alone. She remembered nothing that had happened during the state of great mental excitement or mania.

She often expressed fear that she should be taken to an asylum and that she should be a burden to her parents. These fears preyed more and more upon her mind till her death. After November 13th she had almost no sleep, and during the night her insanity resembled that of May and June, while during the day she suffered from mental depression. January 19, 1878, her father came home late to dinner. She waited

upon him, but left the room before he had finished his meal. She was found late that night suspended from a limb of a tree. Before adjusting the rope she had covered her head with her shawl. She died from asphyxia by strangulation. One arm was found over the limb, indicating that she made an effort to save herself.

Assisted by Dr. C. J. Fox, I made a *post-mortem* January 22d, probably sixty hours after death. The body had been kept upon ice. Countenance natural, perhaps a little swollen; neck slightly bruised and discolored; back part of the scalp congested with venous blood; dura mata quite firmly adherent to the calvarium, and in places covered with patches of coagulated lymph and drops of blood oozing from the surfaces torn from the bone. The whole upper portion of the dura mata had this appearance. The central and lower portions of the cerebrum were extensively softened. The cerebellum appeared healthy.

The weight of brain, without the dura mata, and its reflection of the arachnoid, at moment of removal, 58 ounces avoirdupois upon a platform spring balance. Upon my return to Willimantic I carefully weighed the brain in a tin pail, both weighing 82 ounces. I did not weigh the tin pail until March 9, 1878. It weighed on the same scales, 23 ounces, making the brain weigh 59 ounces on an accurate set of scales.

This case is one of great interest, as it is a brain of adult female of very unusual size.

Erasmus Wilson, F.R.S., says: "The medium weight for the male ranges from 46 to 53 ounces; and for the female, between 41 and 47."

Henry Gray, F.R.S., says: "The average weight of the brain in the adult male is 49½ ounces, or a little more than 3 pounds avoirdupois; that of the female, 44 ounces; the average difference between the two being from 5 to 6 ounces. The prevailing weight of the brain, in the male, ranges between 46 ounces and 53 ounces, and in the female between 41 ounces and 47 ounces. In the male the maximum weight out of 278 cases was 65 ounces, and the minimum weight 34 ounces. The maximum weight of adult female brain, out of 191 cases, was 56 ounces, and the minimum weight 31 ounces.

"The size of the brain appears to bear a general relation to the intellectual capacity of the individual. Cuvier's brain weighed more than 64 ounces, that of the late Dr. Abercrombie 63 ounces, and that of Dupuytren 62½ ounces. On the other hand, the brain of an idiot seldom weighs more than 23 ounces."

In Ziemssen's Cyclopædia are introduced tables showing that the weight of the brain should be a little more than two per cent.

of the whole weight of the body. The weight of brain in this person, had it borne the usual proportion to the body, would have been about 44 ounces.

NOTES ON THE USE OF ERGOT.

Charles James Fox, M.D., Willimantic.

Ergot acts directly on the nerve centers; hence it has long been known to cure neuralgia by its influence on the vaso-motor system, by which arteriolets and capillaries are contracted, and the excess of blood to the painful part diminished and regulated. Hence hyperæmia of the heart occurs when that organ is weak and the capillaries dilated, and should there be any tendency to excitement of any kind in any organ, the main consideration to observe in such cases is to strive at once to strengthen the heart and excite the capillaries to contraction. In such cases as these I have found ergot the great remedy. It is also found especially beneficial in infantile convulsions, when the heart is weak, and where we desire to promote contraction of the cerebral vessels. I have known the worst symptoms of pneumonia or capillary bronchitis to yield to ergot when other measures failed. Ergot will promptly arrest pain, when opium and other measures fail, as is illustrated by a case in my early practice.

Mrs. A. was suddenly seized with very violent pain about the umbilicus, which in a few moments extended around the body, almost arresting respiration by spasms of the diaphragm and abdominal muscles, and agonizing pain. Morphia sulph. hypodermically, with atropia sulph., had been tried, and tried in vain. I ordered her, as a plan of treatment, ℥i doses of ergot fl. ext every hour until the pain and spasms were relieved, which occurred after four doses. Quinine, given the next day, prevented a recurrence. She was kept on ℥ss doses of ergot every four hours, and had no further attacks. The tr. ferri chloridi was also given with the ergot three times a day in tonic doses, and on the fifth day all treatment was stopped. I have used it to arrest hæmoptysis. I have also seen the worst cases of hysterical delirium quieted by this drug. In fact I consider it the best remedy to use in all passive hyperæmias that are not dependent on mechanical causes. I have also used it with success in partial paralysis of the bladder, and in wandering pain in the extremities not due to a specific cause; and as far as my experience goes I believe it is capable of being made of greater practical benefit to the profession than ever before.

LITCHFIELD COUNTY.

To the Chairman of the Committee on Matters of Professional Interest:

Dear Sir,—Notwithstanding the special appeal to each member by your committee, I have received but five answers to the questions sent out, and these were from the towns of Litchfield, Watertown, Norfolk, and Salisbury.

Question No. 1. *Dr. Deming, Litchfield*, reports, "Some diphtheria and scarlatina, generally mild."

Dr. Thompson, Salisbury, "Diphtheria and scarlatina have prevailed quite extensively."

Dr. Munger, Watertown, "Less typhoid than usual, and no fatal cases."

For Wolcottville, I would report an extensive epidemic of measles during the early part of the past year, attacking almost every one not protected by a previous attack, most cases very mild, scarcely coming under medical care. Cases of scarlatina and diphtheria have been of frequent occurrence, only a few cases at a time, about equally distributed throughout the year. A few fatal cases.

There has been a marked immunity from acute lobar pneumonia all through the county during the past winter. Is it on account of the mild weather which has prevailed? That is the way the profession here explain it. We have usually a great deal of it.

Question No. 2. *Dr. Stevens, Norfolk*, reports an epidemic of measles.

Dr. Munger, Watertown, In the early winter we had a very malignant (the most so I have ever seen) epidemic of diphtheria. Out of twenty-five well marked cases, most of them severe, six proved fatal, varying in time from forty-four hours to eight days. The mode of dying differed entirely in the different cases; one dying comatose from the intense poison of the disease in forty-four hours, aged fourteen. One, a child of eighteen months, died in eight days, with mind perfectly clear, and little or no difficulty in respiration, from failure (paralysis ?) of the heart. Another died from apnœa; the false membrane in the larynx and trachea stopping respiration almost immediately. The other three fatal cases were a combination of the above. One case, aged 7 years, the most severe, which recovered, was followed in five weeks by paralysis of the lower extremities (more of the left), and at the end of the

sixth week by strabismus and double vision. The strabismus and double vision were a month in wearing away, and the paralysis in the left leg is not entirely gone now, at three and one-half months from the commencement of the disease.

Two other cases had slight paralysis of the throat.

Question No. 3. Typhoid fever is reported for the most part as very little prevalent.

Question No. 4. *Dr. Deming, Litchfield*, says, "Typhoid fever seems to assume more of the remittent type than ten years ago, but is not, in his opinion, more fatal."

Dr. Stevens, Norfolk, "Typhoid fever does not always present the same type. The disease may not be as frequent, but an occasional case is as severe and as fatal as formerly."

Dr. Thompson, Salisbury, "Typhoid fever is as frequent, but not as severe or fatal as formerly. Perhaps it is better treated than it was years ago."

Dr. Munger. "The cases of fever ten years ago were very *pure* cases of typhoid. For the past five years they have been a sort of cross between typhoid and bilious, or perhaps I should say a combination of the two, frequently difficult to decide which symptoms predominate. I think a smaller percentage of the cases have proved fatal in the last five years, than in the five years preceding."

I do not learn of any peculiar change in the character of typhoid in Wolcottville.

Question No. 5. *Dr. Deming* says, "Very few *satisfactorily*."

Dr. Beach, "Only in a very small proportion of cases."

Dr. Thompson, "About 15 % of cases of zymotic diseases are traceable to bad drainage and impure water, especially well-water, near barnyards and cesspools."

Dr. Stevens, "Until recently, I paid very little attention to sewerage, drainage, or purity of the water supply. I occasionally find patients whose surroundings in these respects are more or less defective, but (plumbism excepted) I have never been able to trace to my own satisfaction, or that of others, the exciting cause of *any* disease, directly and positively to them. In my opinion, these agencies act as the remote—the predisposing, oftener than they do as the exciting causes of disease."

Dr. Munger, says, "A very difficult question to answer. I will say, however, that I have been 'able to trace' the exciting or remote causes in a very small percentage of cases. The majority of the severe cases of diphtheria for the past winter have been within forty rods of a stream of water.

"So in an epidemic of typhoid, or typho-malarial fever three years ago last fall, a large majority were near the same stream some three miles below. I am not at all sure, however, that the water had any very great deal to do in producing the diseases."

As for myself, I am certain that I have been able to trace fully 50 per cent. of all the cases of typhoid fever which I have seen since residing in Wolcottville, to improper sanitary conditions, and especially in very many cases, to impure drinking water, obtained from wells, into which the drainage from a privy or barnyard, or a disordered drain or cesspool, found access. I would also remark that in these cases, when the water was excessively impure, the disease has been *very severe* and *fatal*.

I well remember three cases (two of which proved fatal, and the third barely escaped with life), all in one family. A careful examination of the premises resulted in the discovery of a leaky cesspool drain discharging its contents into the well; the water from which was used by the family until the outbreak of the fever, notwithstanding its very evident filthy condition.

Question No. 6. *Dr. Deming* says, "I have never known every possible source to be eliminated. It seems to me an impossible condition."

Dr. Beach, "With regard to typhoid fever, yes."

Dr. Stevens, "I certainly have known the occurrence of both typhoid fever and diphtheria (severe and rapidly fatal cases) where it was impossible to trace any connection, near or remote, with any previous cause. In such instances, the sanitary conditions were to some extent imperfect, but not markedly bad; other members of the family unaffected by them, and escaping the disease."

Dr. Thompson, "Have known cases of typhoid, scarlet fever, or diphtheria to arise spontaneously."

Dr. Munger, "My positive belief is that I have, a great many. Most assuredly there is quite a proportion of all three diseases in which we can trace no source of contagion."

For myself, I cannot say that I have not known cases in which I was unable to discover how the patient was exposed to the contagion. But to eliminate "every possible source," is rarely possible, when we consider how, even in the country, people come and go from larger places, where these diseases are endemic always, and even if they themselves remain healthy, they may convey the infection to others. And yet there are occasionally cases of typhoid fever, scarlatina, and diphtheria, which present all the apparent con-

ditions of a spontaneous origin. I have seen many of them, yet I do not consider that in my experience the isolation approaches in a single case the positive completeness of the most ordinary experiment in etiological science. Because we cannot trace the connection, does not prove its absence.

Question No. 7. *Drs. Deming* and *Beach of Litchfield*, and *Dr. Stevens of Norfolk*, each report none, and we have had no fully developed cases, except imported, in Wolcottville.

Dr. Munger, *Watertown*, says, "They have not increased, unless we consider diphtheria malarial."

Dr. Thompson, *Salisbury*, has "had seventeen cases of intermittent or remittent fever within the past year."

Within the past two years the above fevers have appeared.

About sixty to seventy years ago they prevailed quite extensively along the line of the Housatonic river, but none since until the year 1876, when it first made its appearance in the autumn.

Question No. 8. *Drs. Deming*, *Beach*, and myself use bovine. *Dr. Munger*, both. *Dr. Stevens*, humanized, and *Dr. Thompson* has abandoned the bovine virus, now using one remove humanized.

Dr. Thompson, "Had trouble with the bovine virus. Deep ulcerations and angry papillary eruptions have caused me much anxiety and trouble."

In the black and mixed races, the bovine has produced erysipelas, urticaria, and lichen. "I want no more bovine."

It has not been my personal experience to find serious trouble from either kind of virus.

I regret that the supply of material at my disposal is so limited.

L. H. WOOD, *Reporter*.

MIDDLESEX COUNTY.

To the Chairman of Committee on Matters of Professional Interest in the State:

From reports received from the members of this County Association, the past year has been one of unusual freedom from fatal disease. Only malarial diseases can be said to have prevailed, and they have at least not been on the increase either in frequency or severity. Judging from my own observation, and conversation with physicians in neighboring towns, zymotic diseases of all sorts have been both rare in occurrence and mild in type.

Below I subjoin reports in detail from towns as far as heard from:

Haddam, Dr. M. C. Hazen.—1. No diseases have prevailed but those of malarial origin. Rubeola to a considerable extent in north part of the town; also intermittent fever.—3. To no great extent, but more cases have occurred than in any previous year since 1870.—4. Of less frequent occurrence; about the same in severity, but of less fatality. Cases continue longer, and are more liable to relapses than in former years. They are of typho-malarial type.—5. In nearly all cases of endemic zymotic diseases I find unsanitary conditions. Such cases often originate spontaneously.—7. Have not increased greatly, but are distributed over more territory; in fact, have become more epidemic than endemic as compared with one year. Have used sulph. cinchonidia for most cases of malaria in preference to quinia, and cannot recall a failure. Also in typhoid, and all cases have recovered.

Cromwell, Dr. J. H. Trent.—1. Malarial fever, intermittent and remittent, the former predominating, and accompanied with violent delirium; and also diphtheria has prevailed, resulting in the death of a number of children. Typho-malarial type has prevailed; less severe, less frequent, and less fatal.

Moodus, Dr. A. W. Bell.—A few cases of intermittent fever were observed in the summer and autumn of 1877; also a number of cases of typhoid fever, which were of a severe type. Malarial diseases increasing.

Chester.—Dr. S. W. Turner reports less than the usual amount of sickness; some typho-malarial; uses bovine virus; has seen bad results only with humanized.

Deep River.—Dr. Edwin Bidwell reports little sickness; typhoid cases mild; uses bovine virus; has seen no bad results.

Old Saybrook, Dr. J. H. Granniss.—1. Malaria only.—2. No serious epidemic. During the winter months there occurred about two hundred

cases of catarrhal conjunctivitis, mostly among children and young adults. The type of the disease was remarkably mild, lasting but a few days, and recovery perfect. Treatment consisted for the most part in frequent ablutions with warm water and the use of weak opiate collyria. —6. The conditions in this question are such that it is not easily answered in the affirmative, as instances of perfect isolation from the rest of the world are comparatively rare. I have met with cases of scarlet fever arising spontaneously, so far as the most diligent search could prove to the contrary. Malarial diseases have not increased during the past year; but have been about equally prevalent during the past two years.

Durham, Dr. R. W. Matthewson.—A mild form of fever which has prevailed extensively in this and adjoining towns during the past year. The symptoms and cause resemble those given by Prof. Alonzo Clark in what he terms bastard typhoid fever. The average duration was about a week. It seemed to have taken the place of regular typhoid to which it bears a resemblance, similar to varioloid and small pox. It seemed to possess an abortive tendency, independent of treatment. It manifested very little of exacerbations or symptoms of a malarial character. Had I been trying a new plan of treating typhoid I might have been deceived by its supposed efficacy.

Dr. Mathewson says he has used bovine virus entirely for the last seven years, and hopes never to be obliged to use any other, because (1) It is more sure to take, which is often of such vital importance after an exposure. (2) He has had no bad arms following its use, which he had occasionally seen when using the humanized, after the utmost care had been taken in the selection and preservation of the virus. (3) None of the ills which flesh is heir to can be conveyed by the bovine. (4) Its use keeps the operation of vaccination in the hands of the profession, where it properly belongs, and is more properly attended to.

J. H. GRANNISS,
Reporter for Middlesex County.

TOLLAND COUNTY.

The principal diseases have been the continued fevers; the cases of typhoid severe, but not fatal. The cases of zymotic disease all seemed due to unsanitary conditions. As there are so many ways of transmitting the poison that produces these diseases, clothing, letters, groceries, etc., a seemingly spontaneous case is not always truly one. We have no endemic-malarial disease—see it in transient visitors. I use bovine virus successfully, and have seen no bad results.

The only case of especial interest was one of general dropsy, hydrothorax, ascites, and general anasarca. Autopsy held four hours after death; found cardiac hypertrophy; heart weighed 44 ozs. troy; pleuritic adhesions of left lung were very numerous; spleen nodulated and doubled upon itself, and the ends adhering firmly. Bright's disease had been discovered before death. One kidney was normal in size, the other atrophied to about a third the usual size; the mitral and tricuspid valves were covered with calcareous vegetations.

I also held a post-mortem Nov. 1, 1877; found a fatty heart, fatty kidneys; the urine had been fatty for some months before death; found one piece of stone, white, and nearly hard as flint, weighing over an ounce, in each ventricle, both right and left. A calcareous degeneration of all the arteries was very apparent. Small quantity of fluid was found in the pericardium.

W. L. KELSEY, *Reporter.*

ESSAY.

THE ETIOLOGY AND TREATMENT OF PUERPERAL CONVULSIONS.

L. S. Paddock, M.D., Norwich.

Gentlemen,—I ask your attention to the consideration of the Etiology and Treatment of Puerperal Convulsions; a subject by no means new, yet possessing many points of interest. It is, moreover, a subject upon which there is a diversity of opinion, writers of an earlier day holding opinions essentially differing from those of a later day. And because in the light of modern science, such new views of the etiology of convulsions have obtained that the works of former masters cannot in all respects be regarded as authority for treatment; and because of the sudden onset and dangerous character of the disease, I deem it worthy of consideration at the present time.

The disease is not frequently met, and for some unknown reason some years are more exempt than others. In a record of over 500 cases, I can recall but four of convulsions, two of which occurred during the past year. Braun states that in Vienna 44 cases of eclampsia occurred in 2,400 confinements. Authors state the ratio of one to six or seven hundred cases.

The term puerperal convulsions, while readily comprehended, conveys very different impressions to different minds. From the multiplicity of names associated with it, it has come to be regarded as a disease assuming many different phases. Thus we hear of the hysterical, apoplectic, epileptic, anæmic, and uræmic. This is not an accurate classification; for disease under each of these names may occur without association with the puerperal state; each is a separate and distinct disease. And inasmuch as each is often met, and not even confined to the female sex, it seems better not

thus to associate them with the puerperal state. Thus hysteric convulsions are constantly met, from the commencement to the cessation of the menstrual period; more often in the unmarried. Apoplexy belongs to neither sex, and may result from any excess, or severe labor, or disease producing lesion of the brain; it is not usually attended with convulsive movements. Epilepsy, though closely allied in its phenomena to eclampsia, is a distinct disease that spares neither age or sex, and indeed is not as common during pregnancy as in the normal state. Prof. Hodge, in his valuable work, says: "Epilepsy seldom originates during pregnancy; indeed, it is stated that if previously existing it rarely supervenes after fecundation. Thus Dr. Tyler Smith states that during fifty-one pregnancies in fifteen epileptic women, there was but two cases of convulsions during gestation or delivery. Dr. Churchill says, among all his patients afflicted with epilepsy only one had puerperal convulsions" (Hodge's System of Obstetrics, page 443). Anæmic convulsions are not peculiar to the puerperal state; a fearful hemorrhage may induce them at any time. Many authors regard plethora as the chief cause of this affection; to such the variety of names is productive of great confusion. In the name, uræmic convulsions, the true cause of the disease is designated. It has been proven beyond question that uræmic poison is by far the most frequent cause; and as this is, almost without exception, confined to the puerperal state, in our consideration of the subject we shall thus regard it. It is not difficult to see how these different names may have originated, as the affections have many phenomena in common. But in their similarity there are also points of difference. An attack of hysteria occurring during the latter part of gestation, may closely resemble and be regarded a true puerperal convulsion. Yet the former is harmless, the latter full of danger. The diagnosis of hysteria may be correctly made, when we learn that our patient is of a nervous temperament, and has been subject to such attacks; that she has suffered from sleeplessness and many anticipated troubles; that there has been no œdema of the limbs; no headache or dizziness; and that she is free from albuminuria. Apoplexy is much more formidable and difficult to diagnosticate, if the patient is not seen till stupor has supervened, and the previous history is unknown. It may be questioned whether the stupor is from intoxication, concussion of the brain, or apoplexy. In most cases, however, we can judge of habits from the appearance and surroundings; there has generally

been some complaint of dizziness or partial blindness; we see there is very slight or no convulsive action (the affection being of the brain and not of the spinal cord); the stupor is more profound, with no returning consciousness, and a non-recurrence of the fit; the resulting paralysis is evident. These are unmistakable signs of apoplexy.

There is great discrepancy of opinions among many distinguished authors as to the etiology of eclampsia. But a few years since, nearly all writers regarded the period of gestation as one of plethora, and any affections arising during that period, as necessarily the result of plethora. Now in plethora the blood cells are more numerous and the albumen of the blood somewhat increased; but that alone does not afford a satisfactory explanation. Pregnancy produces other changes. From Dr. Peaslee's Histology we learn that "The blood of pregnant women contains an increase of fibrine (to 4.4 parts in 1,000) during the last two or three months of pregnancy, while the tissues of the fœtus (and its blood also) are being most rapidly developed." (Peaslee's Hum. Histol., p. 158.) "In pregnancy the blood is darker than usually, is richer in water, but poorer in corpuscles and albumen, and therefore specifically lighter." (Peaslee, page 173.) These, however, are normal changes, and if predisposing causes of convulsions, then every pregnant woman is thereby endangered. But besides the changes in the blood, the researches of modern science show great and abnormal changes in the urine and kidneys; that albuminuria and nephritis may exist in the latter months of pregnancy, and that when existing they render the subjects of them exceedingly liable to eclampsia. This has been proven beyond doubt, so that we may confidently state that few women suffer from eclampsia except those who have albuminous urine. Albumen is never found in healthy urine; yet it may be temporarily produced by the exclusive use of albuminous food, as shown by Brown-Sequard, Hammond, and others. While it is one of the surest signs of Bright's disease, it is also often found in connection with the dropsies following scarlet fever or erysipelas. It may occur in acute or chronic affections of the kidneys; more often in the latter. Says Ziemssen, "Compared with all other causes of albuminuria, inflammation of the kidneys, especially chronic, furnishes the largest percentage amount of albumen in the urine." (Cycloped. Pract. Med., Vol. xv, p. 66.) He states that nephritis is the cause of albuminuria, and further, that "the nephritis makes its

appearance in the last months of pregnancy, and attacks primiparæ more frequently than women who have borne children." (Cyclop. Pract. Med., Vol. xv, p. 310.) But many diseases of the kidneys do not cause albuminuria, neither does every case of albuminuria of pregnancy furnish any discoverable pathological changes in the kidneys. "Kidneys which are extensively diseased, whose gland cells and interstitial frameworks exhibit pathological degeneration of extremest kind, may furnish a urine totally free from albumen." (Cyclop. Pract. Med., Vol. xv, p. 40.)

Having seen that an altered condition of the blood and not unfrequently a nephritis occurs in the albuminuria of pregnancy, there remains another associate condition to be considered,—that produced by pressure or other obstruction of the renal circulation. Some, however, deny the influence of pressure, since both ovarian and uterine tumors exert the same pressure without the same results. A vast amount of evidence has been brought to bear on this recent and very interesting discovery. The fact that convulsions occur so much more frequently in primiparæ suggest some cause as an excitor which does not exist to the same extent in those who have borne many children. In first confinements the abdominal muscles being more tense compress the uterus, strongly forcing it back against the renal veins and greater bloodvessels. This does not occur to any extent in the earlier months; hence we find albuminuria rarely apparent before the sixth month of gestation; and after that, increasing with the enlargement of the uterus. Dumb animals are made martyrs to science, and useful lessons learned from them: the ligation of the renal veins is followed by albuminuria. Perfectly healthy kidneys, in consequence of an altered state of blood pressure upon their vessels, can excrete albuminous urine. Dr. Bedford states that "Dr. Brown-Sequard has positively ascertained the influence of pressure on the renal vessels, in a lady who had albumen in her urine during the ninth month of pregnancy. He placed her in such a position that the pressure was much diminished, and after a certain time the urine ceased to contain albumen. When the ordinary attitude was resumed, there was soon a reappearance of albumen in the urine." (Princp. & Pract. Obstet., Bedford, Lect. xxxiii, p. 508.)

But this albuminuria, though pathognomonic of Bright's disease, is a common symptom in many affections. How can we diagnosticate Bright's disease in pregnant women? If it has not existed previous to pregnancy, and with symptoms indicating it, the diag-

nosis is extremely difficult. But we must remember that the albuminuria of pregnancy generally appears at a certain time, and is rarely dependent on diseased kidney; while in Bright's disease the kidney is generally diseased in a greater or less degree, and the urine besides being albuminous has blood cells or uriniferous casts visible under the microscope. Amblyopia or amaurosis often accompany Bright's disease. It is not usual in Bright's disease for a patient to be so free from all attendant symptoms, and unaware of any aberration of health for two or three months; though we meet with women with the albuminuria of pregnancy who enjoy perfect health till an attack of eclampsia. Convulsions are not common in Bright's disease under ordinary conditions. If the albuminuria of pregnancy and Bright's disease is one and the same affection, why should it in the latter, when so unsuccessfully treated generally, disappear with such marvellous rapidity after labor is completed? Thus while the diseases have symptoms in common, and often co-exist, yet they also occur separately and are not one and the same.

We come now to the consideration of that element which is of vital importance to the understanding of eclampsia;—we refer to urea and uræmic poison. Urea exists normally in the urine and albumen in the blood; but when such a change has occurred that albumen is passing in the urine, and urea is circulating in the blood, something is radically wrong. "In a healthy adult about five hundred grains of urea are daily discharged in the urine." (Dalton's Hum. Physiol., 1859, p. 286.) But "when the kidneys are diseased, the blood contains an amount of urea much greater than in other cases of albuminuria; moreover, the quantity of urea is proportionate to the greater or less advanced degree of renal alteration, a very small proportion of urea in the blood generally coinciding with simple congestion of the kidneys." (Cazeaux, edit. 1874, p. 497.) Its existence in the blood was formerly supposed to be the poison which produced convulsions; but Dr. Bedford speaks of experimenters who have extirpated the kidneys of animals and of those who have injected urine and urea into the veins, and in neither instance have convulsions ensued.

Later discoverers (Frerich) have ascertained that the urea when in the blood is transformed into carbonate of ammonia, and this has been proven by experiment and chemical analysis. In Peaslee's Human Histology we are told, "the carbonate of ammonia is found in the blood only in severe diseases, and especially in

uræmia." (Peaslee's Hum. Histol., p. 155.) If carbonate of ammonia is injected into the blood it will produce all the symptoms which have been attributed to uræmia. (Cyclop. Pract. Med., Vol. xv, p. 113.) That there is a virulent poison in circulation is further shown by the great mortality among children born of women suffering from uræmia; the mortality being estimated by Scanzoni as forty-four per cent.; and of those born living many suffer from convulsions soon after birth. The fact that carbonate of ammonia cannot always be detected chemically in the blood in those cases which appear similar to those in which it is found, proves nothing. Many investigations are often very puzzling, and the teachings of pathology sometimes apparently conflicting; but positive evidence is worth more than that which is negative. Again, all under the same conditions do not suffer from convulsions; but remember the different susceptibility to poisons.

If there be blood poisoning causing fatal convulsions we should fail in autopsies to find much evidence of it; but if caused by plethora there should be some lesions discoverable. But the most strenuous advocates of plethora find the autopsies unsatisfactory. Says Prof. Hodge, "We have endeavored to demonstrate that in all cases of pregnancy there is a natural tendency to plethora, and often to increased vascular excitement." (Hodge's System of Obstet., p. 442.) In another place—"Examinations after death shed but a feeble light on the nature of puerperal convulsions. In a large number of cases no lesion whatever can be discovered after a careful investigation. In some there is manifest turgescence of the venous system, of the brain and spinal marrow. In a smaller number of cases, serous effusions will be found on the surface of the brain, especially towards its base and in the spinal canal. They are also occasionally to be found in the ventricles, to the extent of six, eight, or more drachms. In a few instances blood is effused on the surface, in the substance, or into the cavities of the brain." (System of Obstetrics, Hodge, 1864, p. 441.) From this evidence we may fairly conclude that eclampsia is dependent on blood poison caused by the transformation of urea in the blood-vessels into carbonate of ammonia.

Having thus reviewed the etiology of puerperal convulsions, you will anticipate our views as to its proper treatment. Under conditions above stated, all pregnant women with albuminous urine are liable to eclampsia; this may occur at any hour during the puerperal period. Statistics show that in 449 cases of eclampsia,

convulsions occurred 121 times before labor pains set in; 260 times during the labor, and 118 after the birth of the child. Hodge relates a case that occurred eight days after delivery. The liability is much greater in first confinements than in subsequent ones, which may be easy and natural. But one case has occurred in my experience of the same patient having been attacked at two successive labors.

In a woman thus predisposed to convulsions (remembering the reflex character of spinal action), any mental or moral shock could be an exciting cause, also any irritant in any part of the system. Thus, indigestion, constipation, an over-distended or irritable bladder, and intestinal worms, may, as in children, excite cerebro-spinal action. When you suspect any such causes, remove them if possible. By no means when called hastily to a patient, come with a fixed opinion that you have plethora and congestion, and that a vein must be opened, and afterwards discover to your sorrow that your patient has already lost much blood, and is poorly able to bear further depletion. Animals bled to death die convulsed.

If the labor has begun with severity, and the os uteri is extremely rigid and irritable, the forced downward pressure of the head may be the excitor of a convulsion. For it is well to remember that convulsions are extremely rare in mal-positions, and generally occur in head presentations. (Bedford's Lect. Midwif., p. 497, note.) Under such circumstances where the patient is of full habit, has been a free liver, and whose whole appearance is indicative of too much blood; and further, if the precursory dizziness has been observed, there is great danger of apoplexy. Such cases require depletion and purgation. But there must be a limit to this. I cannot accept the views of some very able writers, who, regarding plethora as the cause of convulsions generally, say, "With most patients fifteen or twenty ounces must be regarded as a small bleeding; double, treble, and occasionally even more must be taken to insure safety. In plethoric patients, in one or more hours the operation must be again repeated to the extent of twenty or thirty ounces, and occasionally the patient will tolerate even two or more bleedings." (Hodge's System of Obstet., p. 445.) Writers also have not made sufficient discrimination as to the proper time for venesection. Churchill says, "At whatever time the attack takes place the first thing to be done is to take away blood from the arm or temporal artery, largely and in full stream." (Churchill's Midwifery,

p. 441.) Now we can hardly conceive of the same treatment as always applicable before, during, and after the completion of labor.

In cases of uræmia we should be more careful of venesection. On this point there is unquestioned authority. We quote the views of Tyler Smith : "As regards the treatment of the form of puerperal convulsions depending on uræmia, the latest experience is against excessive blood-letting, and indeed against bleeding at all, except in the form of a single venesection, at the outset of the disease, in patients of a full habit." (Lect. on Obstets., Ed. 1858, p. 621.) Dr. Kidd of Dublin says, "In cases with hot face and bounding pulse, you may bleed, but rarely." (Med. and Surg. Reporter, Oct., 1877.) In convulsions after labor, without much coma, anæsthetics are peculiarly useful. Anæsthetics (and we prefer ether as safer than chloroform) are specially adapted to all cases of convulsions from reflex irritations. Their use seems the most appropriate in those cases of convulsions occurring in the latter months of pregnancy, and before there is any evidence of labor; they are by far the best means at our command after the labor is completed. In neither of these cases can labor pains be said to produce local determination of blood, or congestions. They constitute the most reasonable treatment for rigid os uteri; for a highly nervous condition of the patient; for excessive pains, and for any exciting or aggravating reflex influence. If the theory be correct, that chloroform produces temporary diabetes, we have together with the anæsthetic, a chemical agent to assist in changing the urea or carbonate of ammonia in the poisoned blood.

The use of opium, subcutaneously, is in great favor in all cases except those of decided apoplectic character; chloral, and bromide of potassium are alike useful. The administration of nauseating medicines, and especially of veratrum, to control too rapid action of the heart, holds a desirable place in our armamentarium.

Should convulsions set in any time during gestation, prior to the commencement of labor, is manual interference demanded? As the fœtus is not viable prior to the seventh month, no consideration for its life should tempt us to interfere for its sake at an earlier period, nor is manual interference demanded except we are confident the life of the mother will be lost without delivery. In a case of convulsions occurring between the fourth and fifth month, the patient being at the same time under treatment for Bright's disease, we used anæsthetics, forcibly dilated the os, and delivered with great difficulty; the delivery afforded no relief, and I now

think it would have been better if we had not added the irritation to that already caused by blood poison. The convulsions continued, with short intervals, till death. If, however, at the full term of labor, but before its commencement, there was excessive distension of the abdomen, so that we had reason to suppose that the excess of liquor amnii was the exciting cause of the convulsion, then carefully rupture the membranes. Should labor commence and the tendency to eclampsia still continue, whether the pains are feeble or severe, dilate the os and deliver as quickly as possible by the forceps; this must be done with the patient fully etherized. The convulsions *may continue* or they *may cease* at the completion of labor; hope for the latter. Statistics show that in 115 cases, in 39 convulsions ceased entirely after the birth of the child; in 36 they recurred, but with less violence; in 37 they continued violent. (Cycloped. Pract. Med., Vol. xv, p. 320.) This shows a ratio of more than one-third relieved by the birth of the child. But eclampsia is very fatal to the children, as they inherit most fully the blood poison. A rapid delivery by forceps is greatly in their favor. In a case occurring Jan. 1, 1872, we had the satisfaction of saving both mother and child by the timely use of the forceps. In the most severe case we have ever met, occurring May 8, 1877, when the patient seemed moribund, after forcible dilatation of the os, and as a last resort, delivery was accomplished by the aid of craniotomy. Convulsions continued after delivery, but the patient finally recovered. Convalescence, though extremely prolonged, was complete, and on the 17th Jan., 1878, just eight months and nine days after the former terrific trial I attended her again in a premature labor, without complications; the child cried at birth, and lived about twelve hours.

We have thus considered at some length, though very imperfectly, the etiology and treatment of eclampsia. But is there nothing in preventive treatment for this terrific affection? Believing, as we fully do, that reflex irritations are often the excitors of convulsions, and that uræmia is the usual predisposing cause, and plethora rarely, and as before stated, that uræmia is a frequent result of obstruction of the renal circulation, much good may be accomplished by assuming such a position when reclining, and so adjusting clothing that as far as possible all pressure on the renal vessels may be removed. A careful regulation of the diet, of which milk shall form one very important article; an adaptation of clothing that may protect the skin from all atmospheric changes;

the use of dry cups over the kidneys, the free evacuation of the bowels by saline cathartics, and the increased action of the kidneys by diuretics, of which preference should be given to acetate or bitartrate of potassa, while colchicum and guaiacum aid in the elimination of urea; the control of irregular or excessive arterial excitement by veratrum and digitalis, and a life free from excitement and anxious care,—with these means at hand, and these precautions observed, a threatened attack of eclampsia can often be averted.

ESSAY.

THERAPEUTICS OF THROAT AND EAR DISEASES.

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Considerable advance has been made during the past ten years in the treatment of throat and ear diseases. While formerly the treatment was almost wholly constitutional, latterly the main dependence has been placed upon local measures. There has been in fact a harmful tendency toward the extreme, so that the constitutional treatment has fallen into partial disuse. The increased experience of local treatment has given also courage in the use of agents which were for a long time considered dangerous, and improved methods have been devised, whereby more rapid and certain effects are produced. No doubt it is for these reasons that the aid of slowly effective constitutional treatment is in the majority of cases unsought; but, as I propose to show hereafter, the latter is quite as essential as, and requires far more delicate judgment in its management, than the former.

Within the limits of a single essay, it is not possible to pass in review all the agents and methods used, so that it will be necessary to confine myself, for the most part, to those with which I have had experience. In dealing with this subject I will speak first of local, and later of constitutional treatment.

Since the throat and ear are contiguous, and lined with the same mucous membrane, we should expect not only to find, generally speaking, the same diseases affecting both ear and throat, but also that the treatment which is suitable for one is suitable for the other. This is so in theory, and would be so in fact, were it not that the conditions are not identical; for instance, the throat has a large opening to the exterior of the body, viz., the mouth, the ear but a narrow, long, and circuitous opening by the way of the

eustachian tube; the throat can be easily got at, while the middle ear is situated six or seven inches from the hand, and around a corner; the discharges from the throat are easily expelled through the mouth, while those of the middle ear find difficulty in passing through the narrower portion of the eustachian tube. Hence operators are in the habit of making a distinction in the treatment of the two classes of diseases, and while using powerful remedies to the throat, use but the mildest in the ear.

It is my purpose to show, however, that this is an error of judgment and a want of courage on the part of the aurist, and that by treating his cases more heroically he will have greater success. Let me take, for example, two illustrative cases—hyperplasia of the pharynx, and hyperplasia of the eustachian tube and middle ear. In the former case the physician will use, topically, iodine, nitrate of silver, tannin, etc., in strength sufficient to produce a powerful action on the mucous membrane; in the latter he will content himself with solutions of silver, zinc, or alum, and acknowledge to himself that they are powerless to effect a benefit. He prefers to trust to large doses of iodide of potassium, iodoform, or arsenic, forgetting that while these remedies may produce mild action in the abnormal tissue, they produce a much greater and harmful action upon all the healthy tissues of the body.

Is it possible, you will ask, to use the stronger solutions for the ear? Do they not set up acute and even dangerous inflammations?

These questions I am able to answer from my own experience; and the answer is, it is possible to use them, and yet they set up dangerous inflammation.

If they are used when the membranæ tympani are imperforate, they are dangerous remedies, but if the middle ears similate the throat in having a free opening to the external world; in other words, if the membranæ are perforated, they do no harm.

It will be necessary to elaborate the idea more fully, in order that I may be perfectly understood. If a perforation equal to one-tenth of the entire drum exists in an otherwise healthy ear, the diminution of hearing is hardly noticeable; indeed, the perforation may increase to about one sixth of the size of the entire drum, before the faintest conversational tones are lost at the ordinary distances.

Hence it is always better when one has to deal with a chronic middle ear catarrh, to make a circular perforation in the drum at

once; for while it does no harm, it gives the operator an immense advantage. The disease is no longer seven inches from his hand, reached only by a circuitous and usually closed canal, but two inches away in almost a straight line. Furthermore, the disease is no longer one of an internal, but of an external organ; hence all discharges find a ready and constant escape, all therapeutic agents can be locally applied, and the disease can be closely studied with the eye. This then is the reason why the same remedies in the same strengths which are used for the throat may be used for the middle ears and eustachian tubes, without producing those dangerous results which are so much feared, because the excessive temporary discharge which is set up by the remedy, and which is so easily thrown from the month, finds an equally effective exit by the perforation of the drum of the ear.

I think I shall be able to convince you of the truth of these statements by the history of my own experience. When I began treating the ear, it was my habit to perforate the drum in about 75 per cent. of all cases which came under my care, following the example of Hinton of England, but I continued for a long time to use the mild solutions, gradually I gained the courage to use stronger and stronger solutions; and more varied remedies, because the milder either required so long a time of treatment, and was wholly ineffective—a trial to both physician and patient—until finally I made no distinction in treatment of throat or ear, as regards strength of remedies used.

Allow me to give a case in illustration. Mr. M., aged 36 years, desired to be treated for an otorrhœa of the right ear, of several years' standing. Perforation equal to $\frac{1}{6}$ of entire drum existed in the lower posterior third. Solution of nitrate of silver, 2 grains to the ounce of water, was used for a month, with no apparent benefit. The solution was then increased to 5, 10, and finally to 20 grains to the ounce, and at the end of six weeks' time, or two months and a half altogether, the discharge ceased. Watch heard twenty inches at conclusion of treatment. Thirteen months afterwards he appeared again with similar discharge of two weeks' standing—cause, severe cold. This time a solution of 180 grains to the ounce of water was pressed through the ear into the mouth, followed by several injections of ice-water, to stop the immediate burning pain.

In one week the discharge ceased entirely and has not again troubled him. No other except this single application was used.

No trouble was experienced by the patient of any sort, beyond a slightly increased discharge for a day or two; but the greater strength of the solution produced less pain than the former one of 20 grains, because the precaution was taken to follow it with ice-water. In this case had so strong a solution been injected through the eustachian tube, with imperforate drum, I should have expected to have produced inflammation and perforation of the drum, intense pain, and possibly inflammation either in the mastoid cells or of the meninges of the brain.

In another case of hyperplasia of the middle ear and eustachian tube, Judge B., aged 33 years, after other milder remedies had been used, including a silver solution of 180 grains, a solution of 480 grains to the ounce of water was used with the desired benefit, and with no disagreeable effect to the patient. These two cases, in which one of the most powerful remedies known was used, certainly prove one fact, that heretofore operators have been too timid in the use of therapeutical agents in treatment of middle-ear and eustachian-tube diseases.

In the same way, always with a perforated drum, other remedies have been used from time to time, as the cases seem to demand it, saturated solution of sulphate of aluminum, oil of cubebs, tinct. of iodine, and iodized phenol, which is a compound of re-sublimed iodine and carbolic acid, each one part, glycerine two parts, carbolate of potash 3i to the ounce of water, alkaline steam and warm, medicated air, and ice-water.

Several questions of interest might be asked and answered here. First, What is the effect upon the membranæ tympani of strong remedial agents? I do not find they produce ultimate harm. During the use of these strong solutions, the drum is inclined to be congested and the perforation to slightly enlarge. Much depends upon the delicacy of handling the remedies. If much force is used, the drum becomes not only congested but inflamed, the nerves may also be injured. Hence it is better in cases of stenosis of the eustachian tube to attack the latter with the catheter, at the same time that the drops are pressed gently into the ear.

Iodized phenol has a direct effect upon the drum, however, which is of much importance when one has to do with thickened drums. It causes a marked thinning, so that if applied to a healthy drum, it soon becomes thin, dry, and parchment-like. The perforation will not usually heal entirely after treatment ceases, the per-

foration gradually contracts to a small opening, scarcely perceptible, which does not interfere materially with the hearing. The harm done by its still remaining open, is greatly overbalanced by the increase of hearing from other causes. In concluding this section of my remarks, allow me to report a case which illustrates some of the statements made.

Miss M., aged 22, has been very deaf for five years. Watch, right six inches, left three inches. The right ear I treated on the recognized principles, the left according to the principles here laid down.

The disease was hyperplasia, with collections of mucus in the middle ears. The right and left were treated for some days with carbolate of potash solution through the catheter in order to soften the mucus. The right was then washed out with the double catheter, when much flaky mucus was dislodged; afterwards it was inflated, and a mild solution of alum or zinc was injected twice weekly. The left membrane was perforated, and a weak solution of potash pressed through into the mouth, and the middle ear was inflated by catheter.

When the perforated drum had ceased to be congested, that is, in three days' time, strong potash solution was pressed gently through into the mouth, followed by inflation by catheter. After this, the following remedies were used: Strong solution nitrate of silver, 100 grains to the ounce, oil cubebs and iodized phenol, finally, a solution of silver, twenty grains to the ounce, until the discharge ceased. The hearing distance rose from three to twenty inches in three weeks' time. Afterwards the discharge returned, and was treated with oil of cubebs, the hearing diminished to six inches, and again rose to eighteen where it now remains.

The improvement in the right ear during the same time was four inches. The perforation still remains, but it is about half the original size, and will possibly entirely close.

While the recognized local treatment of ear diseases is quite limited, that of the throat is very varied.

We have on the one hand a long list of astringents and alteratives; silver, alum, tannin, iodine, zinc, etc., used either in solution or powder, by insufflation; on the other hand, vapor and hot air medicated with astringent stimulants, anodynes, alkalies, and acids. In addition, cold and electricity must be mentioned.

Among the varied assortments of remedial agents and methods, it is difficult for a physician in general practice to choose. Instead

of using all at his command, he is more apt to select one or other agents, and a single method, and rest his hopes on these. Even specialists in this department of medical science usually adopt one or other method, and select a few out of the many drugs at his disposal, for all usual cases, only seeking farther when a special case or emergency arises.

I may be pardoned then for not describing the uses of all these remedies, but may confine myself simply to those with which I have gained the best results, and which seem to me to answer in all ordinary cases.

The chief among them for use in solution, either for ear or throat disease, is nitrate of silver. It is caustic, astringent, antiseptic, resolvent, alterative, and stimulant in its action, the pain from its application, even in saturated solution, is slight and temporary, and easily ameliorated by the use of vinegar or ice-water. Its action extends only to the part touched, and may be limited, therefore, to a small space if need be.

There is no disease of larynx and pharynx, with the exception of perichondritis, in which its use is not followed by benefit, but it is especially in cases of hypertrophy that this drug produces such brilliant results.

The best method of using it either upon the pharynx, larynx, or posterior nasal cavity, is by means of a camel's-hair brush and in solutions of rapidly increasing strength, beginning with sixty-nine grains to the ounce of water, and increasing by twenty at each application until a saturated solution is reached.

One peculiarity of the mucous membrane of the throat is its toughness, its rapid loss of sensibility, and its want of sensitiveness to the action of medicines. Hence, after a few applications, the saturated solution causes no more pain than the weaker solutions; and is absolutely required to produce the necessary alterative effect. From making applications of this sort to several hundred throats, I am able to say that no harm is ever produced, and that the following general rule applies to all cases, viz., the stronger the solution used, the more rapid the cure. Next to the silver in importance, I should place the iodized phenol, and after this the following, in the order named : saturated solutions of sulphate of aluminum and sulphate of zinc, tincture iodine, powdered alum, tannin and oxide of zinc, oils of wood, tar, and cubebs.

The astringency of fresh grapes or of pure Bordeaux wine is sometimes a sufficient application to effect a cure in very mild

cases. But the best assistance to the action of the nitrate of silver is found in warm medicated air, obtained from a "Morell-Mackenzie" inhaler or from a simple flask made upon that principle. And, indeed, for acute inflammations no other treatment will be found necessary beyond its use.

With an inhaler of this sort, many therapeutic agents can be used beneficially, which could not be used at all in any other way.

First in the list come the stimulant aromatic oils of cassia, lemons, origanum, thyme, wintergreen, and the like; next the sedatives, as oil of hops, æther, benzoin, chloroform, tinctures of opium and belladonna, juice of conium, oil of sandal-wood, and the like. Next the astringents, as nitric and sulphuric acids; the balsams, cubebs, and iodine. Then come the resolvents, as acetic acid and the alkalies. And finally, the pure antiseptics, as creosote and carbolic acid. Here we have a long list to select from, giving us almost every action upon the throat and ears which we need. For instance, for acute simple sore throat, such a combination as the following is very useful: Take of acetic æther ʒss, oil of lemons ʒi, tincture benzoin ʒiiiss, "mix;" "S" ʒi, with inhaler at temperature 150°.

Here we have a resolvent sedative, an astringent antiseptic sedative, and two mild stimulants. After the second or third day, tincture of iodine can be added to each dose, beginning with one drop and increasing daily by one until five drops are used; at the same time the temperature may be diminished five degrees for each drop. In this way we add a powerful stimulant alterative to the mixture.

If we desire to counteract severe laryngeal or bronchial spasms, oil of hops and tincture belladonna may be used with or without æther or chloroform, and with some of the balsams. Indeed, almost any combination may be used to meet any particular case.

Warm medicated air is more suitable, however, to cases which are confined to their rooms, or to use during the summer months; hence in winter, for those who must be out of doors, I consider the cold spray of most service.

Before passing on to a brief survey of constitutional treatment, allow me to call the attention of my colleagues to an agent which should rank very high, not only with the specialist, but with the general practitioner, viz., cold. The larynx is situated so near the surface, that it is quite possible to bring its temperature down almost to freezing point, and thereby check any progressive

ulcerative or membranous inflammation,—a fact of especial value in cases of membranous croup or laryngeal diphtheria. It is equally valuable in perichondritis tuberculosa.

The best method of applying cold is by a mixture of salt and ice, inclosed in a delicate rubber bag, such as is sold by druggists for an objectionable purpose; which is then placed directly over the larynx. The following case in brief illustrates the benefit derived from cold:

Miss A., aged 22, six weeks ago returned from the South to die. When first seen, had eaten and drank nothing for four days, on account of the intense inflammation of larynx and pharynx. She had during the winter several long attacks of severe inflammation and pain in the larynx, which were relieved by the bursting of an abscess and the discharge of bloody purulent fluid; has a tubercular history extending over three years. At the time of examination some dyspnœa existed; the pharynx was deeply infiltrated and inflamed; the skin over the larynx felt hot to the touch; the larynx itself was quite prominent. Patient suffered from such intense pain that sleep had been impossible. The larynx was almost frozen by the method above described, which was made possible by its prominence and position. When all pain ceased, gargle of ice-water was used, on the second day, fluid food was taken; on the seventh day solid food could be taken without pain. Since this time to the present the ice and salt application has been used constantly for two weeks' time; since then four times a day, for an hour at a time. During the time of the constant use of the ice-bag, the skin over the larynx was not sensitive to the prick of a needle; the voice returned during the second week; the dyspnœa passed away during the first week; the abscess burst during the third week, discharging a quantity of pus, among which cells of a tubercular character were found by microscopic examination. At the present time the patient is able to sit up, has a good appetite, and grows stronger every day.

Laryngoscopical examination showed that the disease is Perichondritis Arytenoidia Sinistra Tuberculosa.

In conclusion, allow me to say a few words only—in order to make way for others—on the subject of constitutional treatment. Many cases of both ear and throat diseases are of constitutional rather than of local origin.

There is, for instance, a gouty laryngitis, as well as a gouty otitis; an œdema laryngis, due to poverty of the blood, to extreme anæmia, and an œdema of the middle ear, due to the same cause.

Chronic congestion of the pharynx and a severe ringing in the ears, with diminution of hearing-distance, due to over-feeding, lack

of exercise, and a congested liver; hysterical paralysis of the larynx or pharynx, and hysterical deafness.

It should be the endeavor of the physician, therefore, to discover if possible a constitutional origin of the disease, before local treatment is undertaken; for if the former be overlooked and left untreated, local measures will have little or no effect. This requires much care and patience, both on the part of the physician and patient, also much delicacy in diagnosis. Forgetfulness of the possible constitutional origin of the disease is the great fault of the majority of pure specialists. In constitutional treatment of purely local diseases I have no faith; but in local diseases of constitutional origin constitutional remedies should be our main reliance. It is the best plan, indeed, to avoid all local treatment until the constitutional have been used for some time, for in about half the cases of this sort the former will be found to be entirely unnecessary. Thus, I have seen iodide of potash taken for several months in large doses, for stenosis of eustachian tube and hyperplasia of middle ear, with no other result than the deterioration of the general health. Iodine, bromide, cod-liver oil, phosphorus, belladonna, are all used for the same purpose, but without effect. In conclusion, let me lay stress upon the idea for which this paper has been written, and that is, that we need change, not in the therapeutical agents which we employ—for we have enough of them—but in the courage and methods with which they are used.

ESSAY.

THE RELATION OF UTERINE CONTRACTION TO POST-PARTUM HÆMORRHAGE.

E. P. Swasey, M.D., New Britain.

On no other point, probably, is the profession more united than on that of the hæmostatic action of uterine contraction. To this muscular tone of the uterus after labor, do we look for the safety of the patient from one of the most dangerous accidents which can befall her, and the exemption of the physician from one of the most trying positions in which he can be placed. The correctness of this opinion, a cardinal point in the accoucheur's belief, venerable and almost universal as it is, it would appear idle to dwell upon, were it not for the fact that it has found its opponents among men of distinction.

The subject of this paper was suggested by the notice of an article which appeared in the October number of the *Practitioner*, 1876, by Dr. John Haddon of Manchester, and which was read at the annual meeting of the Lancashire and Cheshire branch of the British Medical Association in June, 1876.

In that paper the author presents several propositions illustrated by cases with which he endeavors to demonstrate the following theory, viz.: "That the state of muscular tone of the uterus has nothing whatever to do, either in preventing, causing, or arresting post-partum hæmorrhage."

It is to the vascular and vaso-motor systems, acting and reacting upon each other, that he looks for conditions influencing hæmorrhage.

His propositions are as follows:

Prop. 1. "If the generally-received opinion be correct, there can be no flooding from a contracted uterus, and there ought to be flooding from a relaxed one."

He does not dwell upon this point, as he considers that all who believe in the hæmostatic action of a contracted uterus will admit its truth."

Prop. 2. "Cases have been met with, where the uterus was uncontracted, and yet no flooding took place."

Prop. 3. "Cases have been met with in which flooding has begun with a contracted uterus, and continued, when to the hand externally it was firm, lying below the umbilicus, and preventing the entrance of the whole hand into its interior."

I have summarized his cases, four in number, retaining the important points, as follows:

Case 1. One of retained placenta. An hour subsequent to a natural labor, at which time the uterus could be felt, large and moderately firm, he inserted his hand into its cavity, after overcoming resistance at the internal os, for the purpose of removing the placenta, which was accomplished, and followed by only a normal loss of blood, and subsequent firm contraction.

Case 2. One of frequent occurrence, and he says, "Perhaps the most common after delivery." In this instance the uterus was small, and hard just after delivery, and then gradually enlarged, and reached nearly up to the umbilicus, with occasional after pains; the discharge was normal.

Case 3. In this, flooding came on three-quarters of an hour after delivery. At this time the uterus felt firm, and did not reach the umbilicus. Owing to an excessive flow, he introduced his hand into the vagina, but could not get the *whole* hand into the uterus, owing to its contracted state. He removed what clots he could reach, and repeated the operation, this time carrying his hand to the fundus. After a third trial, pains came on, and the discharge was normal, having administered brandy, and applied wet cloths to the abdomen.

Case 4. Was one in which flooding occurred with delivery, and continued for an hour, during which time the uterus felt firm, and laid below the umbilicus. When after-pains came on, the organ became more tense, and almost no discharge. During the flooding, cold, wet cloths were applied to the abdomen, and the child to the breast.

The first point to which I desire to call attention, relates to the conditions of contraction and relaxation. Between two decided extremes, complete contraction on the one hand, and perfect atony on the other, we find all degrees of muscular tone, and the nearer

the uterus approaches the former, we find the probability of hæmorrhage lessened, and its liability increased directly as it departs from this condition. This statement applies to the first hour or so following labor. Later, when coagulation has been favored by the interruption of the blood-current, considerable relaxation may follow without hæmorrhage. Complete contraction comprehends a condition in which the uterus presents to the hand the sensation of a hard cartilaginous ball, its fundus occupying a position nearly on a level with the pubis, a condition of the organ impervious to the hand, or even a portion of it. Observation directed to this state shows that it generally alternates with more or less relaxation. During such moments of subcontraction, blood may collect in the uterine cavity, and not be noticed until the pain occurs, when it comes with a gush, ceasing, however, as the contraction approaches its maximum. These relaxations may be so frequent or long continued that a considerable, or even dangerous hæmorrhage may result, but with a little attention we shall notice that the current is an interrupted one.

Now if we limit this term contraction to an absolute instead of a relative condition, I think we can at once prove the fallacy of his argument, for in none of the cases quoted did hæmorrhage arise in this state of complete contraction, nor did it continue in any case after the occurrence of this condition. The fact that in the two cases of flooding mentioned by him, the cavities contained clots, and more than this, that he was enabled to introduce his hand, is, to my mind, sufficient evidence of a partially relaxed state. Further observation also showed that the organ became reduced still more in size.

There are, however, degrees of subcontraction capable of controlling hæmorrhage, but they are to be determined only in each individual case.

The possibility of overlooking the real condition of the uterus, may lead us into the error of ascribing a hæmorrhage to a contracted condition. This was recently exemplified in my own practice, and I was not a little gratified with the observation, inasmuch as it occurred while on this subject. I was called to attend a patient in her third labor, which was normal. After I had separated the child, I removed the placenta by pressure and slight traction on the cord. Following this, was a natural quantity of fluid and clotted blood. In her previous labors she had a remarkably small discharge. The flow continued, though to the

hand the uterus presented a hard feeling, and was below the umbilicus. Dissatisfied with her condition, I made a more careful examination, and discovered that the sides were much softer than the fundus. Kneading overcame this, and the hardness became general, yet the bleeding continued, and I began to feel some anxiety. Continued pressure, however, convinced me of my mistake in supposing that the contraction was complete, for the uterus became sensibly smaller and harder, and with this the hæmorrhage ceased.

Referring to his case of retained placenta, I offer this explanation of the absence of hæmorrhage.

On the one hand we have a moderately firm uterus, and on the other a counter pressure sustained by a rigid os, thus causing the placenta to act as an efficient tampon. The case is not a parallel to one whose walls present the same tone, but whose cavity is empty; in such a case, judging from my own experience, more or less hæmorrhage would ensue. At the most, the case gives but negative evidence in support of his theory.

In view of the foregoing the question arises, What course does nature pursue in arresting post-partum hæmorrhage?

Is it by the action of the bloodvessels, independent of the uterine fiber, or both in common?

Reference to the anatomy of the gravid uterus shows that its muscular elements are the same as those found in the arteries, and that its fibers cross and interlace with each other in many directions; that between and separated from these by a delicate areolar web, pass the enlarged arteries in a very tortuous course. The veins, on the contrary, possess only their inner coat, which lies in immediate relation with the uterine fiber. Vessels and organ receive the same nervous supply.

This relation of the uterine fiber to the bloodvessels would seem to be one most admirably designed for controlling the blood-current, notwithstanding Dr. Haddon says that "it assigns to the uterus a function for which it is ill adapted, and to perform which the rudest mechanic would not have entrusted it."

Endowed with nerves from a common source, we should naturally infer that, as a rule, impressions conveyed by means of these nerves would produce like results in both; that the action of one should be *pari-passu* with the other. An opinion to the contrary, that the vessels should be contracted when the organ is dilated, and *vice versâ*, is not in accordance with the teachings of experience, a very safe guide in forming a correct opinion.

If we are to account for the presence or absence of hemorrhage on vascular condition alone, then we are at once struck with the remarkable uniformity of condition observed in the uterine fiber, for if there is bleeding we find more or less relaxation, as is shown by a subsequent firmer contraction, coinciding with the cessation of the hemorrhage. This is amply demonstrated in the employment of remedies which are capable of causing, indirectly, the arrest of the hemorrhage, such as ergot, applying the child to the breast, cold, etc.

We always find, in case our treatment is successful, that increased uterine action accompanies a diminished flow, and until the former is accomplished little or no difference is perceived in the latter.

In accordance with his theory we must consider that when the uterus is contracted to its fullest extent, the space between the fibers are greater or only equal to the full caliber of the vessels, or that the walls of the latter are like rigid tubes, maintaining their patency under a powerful pressure, arguments alike contrary to reason and fact. With the same reasoning we might argue that the ligature, a fair analogy, has nothing whatever to do with checking the flow of blood, which, if true, would be a paradox remarkable indeed; or if after its application we should notice that hemorrhage continued, or its recurrence, we should not therefore be justified in discarding the ligature as useless, but rather ascribe the fault to the method of application.

Again: do we ever find complete inertia without flooding after a partial or complete detachment of the placenta? Cazeaux says that in cases of inertia the separation of the placenta should be cautiously avoided until after uterine contractions have begun, for the premature separation "would inevitably produce a frightful hemorrhage." In such a case as this we should have an excellent opportunity of testing the ability of the bloodvessels to restrain hemorrhage, but it would prove, I think, a very dangerous experiment.

Considering the contractions at the beginning and during the progress of labor, he says: "We may fairly conclude that if the contraction of the uterus has any effect on the circulation through it, it must tend to constrict both arteries and veins, and so either lessen or altogether stop the circulation in the maternal portion of the placenta. Were such to happen, the child would surely suffer, but we have no evidence that it does."

This does not appear to me as a fair argument. Because we admit or rather claim this property for the uterine fiber in some degrees, we are by no means bound to admit it in all. Using the comparison of the ligature again, we should, admitting his position, be expecting as much from the loop when it first comes in contact with the artery as when it is tightly and securely tied.

Previous to the rupture of the membranes, especially, we have in the uterine contents a decided obstacle to the full scope of muscular action, which is much weaker than after these have been partially expelled; and although during these early pains the uterus feels firm, this must in part be attributed to its contents. Consider, for instance, a case where the uterine cavity is empty, and as much dilated as at the beginning of labor, and I am very decidedly of the opinion that this same amount of contraction would have no effect on the flowing which would necessarily be present. He also refers to cases of placenta-prævia, where hemorrhage has been arrested after the complete separation of the placenta, and while the uterus still held the fœtus. Setting aside the influence that the pressure of the presenting portion of the fœtus would have, it in nowise conflicts with the theory of considering the arteries and organ as one, to suppose that here the vessels by their own contraction stop the hemorrhage, a sufficient stimulus being offered by the forcible separation of the placenta. For we know that irregular contractions in the uterine fiber are not uncommon, and if this and the arteries are one as a rule in action, then this is to be considered but another form of irregular contraction. Bearing in mind, then, the anatomy of the organ and the very apparent coincidence of condition as regards the arteries and uterine fiber, it seems but rational to consider that nature has so designed it that it shall act as an additional coat, a powerful auxiliary to the arteries, thus exemplifying the bounty which she always provides.

In conclusion, it appears to me that he has based his opinion on premises unsupported by sufficient evidence, and that he has sought to deduce a theory from exceptions rather than generalities. The obvious necessity of producing instances from either of the extremes of uterine condition, exactly the reverse of what always obtains, and which would have been crucial tests, he has not done, and such failure is correspondingly damaging to his theory, and his want of faith in his own opinion is manifested in the treatment of the cases quoted. I fail to perceive the wisdom of questioning a theory the practical working of which has probably done more

than that of any other in the saving of human life, and which can scarcely, in my humble opinion, be improved upon, and until a better one is offered which can stand the test of demonstration, we shall do well to discard all others and adhere firmly to the idea that uterine contraction is the only condition compatible with a patient's safety when flooding, for conflicting theories are very apt to give rise to indecision in practice, which at no time is more deplorable than when dealing with post-partum hemorrhage.

OBITUARIES.

WILLIAM SCOTT, M.D., MANCHESTER.

By Gurdon W. Russell, M.D., Hartford.

William Scott, M.D., the son of Joseph and Eunice Scott, was born in Brooklyn, April 26, 1807. His education was obtained in the common schools, and at the Wesleyan Academy, at Wilbraham, Mass. After pursuing the usual course of medical study under Drs. McCray and Hamilton, he graduated at the Berkshire Medical College, at Pittsfield, in 1831, and soon commenced the practice of medicine at Wapping, where he remained about a year. Afterwards he resided at Oakland, in the vicinity of Wapping, for ten years, and a short time at Rockville. Then removing to North Manchester, he was in the continuous practice of his profession for nearly thirty-four years, enjoying as much of the confidence and esteem of the public as falls to the lot of most men.

Dr. Scott was married to Miss Emerett McIntosh, who survives him.

I know but little of him as a boy, or as a young man; he was older than myself, and had been in practice for some years before I was much acquainted with him. But after awhile we were brought more together, and I began to know him, and understand his modest manner, and unpretentious ways, his unselfishness of character, and sterling common-sense, and saw in what a quiet way he took in the essential particulars of a case, and adapted his measures to its treatment. There was about him no show or display in manner or in action, nor was there a studious avoidance of it; nothing unnatural whatever, but an honest, downright acting out of his character, which required nothing factitious, because it fitted him without an effort. So when he was sometimes accused of speaking the truth boldly, but nevertheless kindly, I can well understand that it came from no inhumanity of feeling, nor was there any intention of rudeness of speech, but it was the honest

expression of his thoughts, which found their vent in the most natural manner. Having had his say, the subject was dismissed from his mind. The sick man cannot always bear to be told the truth, though expressing a desire to hear it; the healthy man bears it but little better, perhaps.

Dr. Scott was faithful in his attendance upon his patients, and gave them the full benefit of his skill. If they wished for further advice, or if he himself thought it desirable, he had no objection or hesitation in saying so. And he was so singularly free from "notions," or obstinate or preconceived opinions, that it was a downright pleasure to meet him and confer about the case. It is not to be understood that he always gave up his views to those of another, for he did not, being long accustomed to think for himself; but if he did not agree, there was no fussiness in his manner, nor offensiveness in his opposition. He had learned to endure what he could not remedy, and besides, it was his nature to be mild and conciliating.

He took such a common-sense view of his profession that he treated his patients well, and I have often thought that he was one of a class much larger than is supposed, who treat a majority of the diseases of human life quite as effectively, but more modestly than some, with whom is no more of sound sense, but much more of pretension. Happy is that community which has such a sound practitioner, going about his business quietly for years, unobtrusive in his manner, unobjectionable in his character, and who strives to do his duty as God has given him light.

Such a man was Dr. Scott. In the affairs of his town, in matters of morals, in instruction, in temperance, he was to be found on the right side. He was long and largely interested in the Congregational Church, of which he was a deacon, and a worthy member; whatever subject there was which promised good, found in him an advocate.

His clergyman in a memorial discourse speaks of him as having been especially devoted to his church, and that to his untiring labors much of its prosperity has been due.

I am informed that he kept a record of his obstetrical cases, and that the last one, attended shortly before his death, numbered the seventeen hundred and twelfth, and further, that there had been among them very few instrumental cases. This recalls to mind the experience of another practitioner in a neighboring county, who had arrived at nearly the age of three score and ten, and whose business

had been extensive, before he had found it necessary to use the forceps, and had never provided himself with them. At a time when most men think of laying them aside, he came to the city to purchase, not as he expressed it, that he considered it necessary, but in order to quiet the women of the town. He possessed, and all like him possess, more than the usual share of patience of most men.

Dr. Scott had usually enjoyed very good health; a fever a few years before his death had been quite severe, and left him, as he thought, in a less vigorous condition than before. Yet he continued about his daily business, with no special evidence of disease, though saying that he wished to exert himself less than before. Perhaps this is the way in which increasing age affects to excuse itself, whether conscious or not of its infirmities. While addressing an evening meeting, he suddenly stopped, placed his hand over his heart, and complained of great pain. After the next morning he recovered his consciousness, and for two days he appeared to be improving, when suddenly the pain returned, there was great difficulty of breathing, and in a few moments he was dead.

The esteem in which he was held was shown by the large concourse at his funeral.

NOAH H. BYINGTON, M.D., SOUTHINGTON.

By R. M. Griswold, M.D., North Manchester.

Noah Henry Byington was born in Bristol, Sept. 26, 1809, and died in Southington, Dec. 29, 1877, aged nearly sixty-nine years. He received his early education in the common schools and at Cheshire Academy, from which he graduated in 1826. He commenced the study of medicine with his elder brother, Dr. Charles Byington of Bristol, teaching school during the winters, until 1829, when he entered the Yale Medical School.

In 1831 he went to Philadelphia, and attended a course of lectures at the University of Pennsylvania. Returning to New Haven in 1832, he received the degree of M.D. from Yale College, and immediately entered the practice of his profession in Wolcott, then quite a thriving town. Here he remained for sixteen years, doing a large business and occupying many positions of trust and

honor, several times representing the town in the legislature. In 1849 he removed to Southington, where his professional reputation had already preceded him.

An indomitable will and perseverance, a strict and honorable regard for the rights of others, a fearlessness in expressing his opinion upon all occasions when it was desirable, and a close and diligent attention to business, made him for many years not only the leading physician in his own and the neighboring villages, and the most prominent man in the town where he lived, but one upon whom every one looked with respect. His gruff manner and rough exterior at first impressed a stranger unfavorably, but a more intimate acquaintance proved him to be a man of the keenest sensibilities and utmost tender-heartedness. In the sick-room a kind and encouraging word, or a gruff but kindly reprimand, from him, was often more potent in effecting a cure than the most consummate skill in prescribing by a physician of less commanding presence. In fine, what he lacked in refinement, was much more than compensated for by an unusual amount of plain and practical common-sense.

Prompt, energetic, and decided, the value of his services as a public officer were properly recognized, and as selectman, member of the legislature, and of the board of health, he was several times elected to represent the interests of the town. In 1849 he was admitted to the fraternity of Free and Accepted Masons, in Harmony Lodge, New Britain. He was Worshipful Master of Friendship Lodge, Southington, for many years; one of the charter members of Keystone Chapter of Meriden, also its first High Priest; a member of Hamilton Council, and of Washington Commandery, Knight Templars, of Hartford. He was one of the first stockholders in the Southington Cutlery Company, and one of its directors, and was interested in several other companies in the town. With the growth of manufacturing interests in that place, and consequent increase of population, his professional work increased to such an extent that he found it necessary to associate with him a younger man, and in May, 1876, he formed a partnership with Dr. W. G. Steadman, formerly of Pennsylvania, but continued in active practice until a week previous to his death.

Politically he identified himself with the Democratic party, but was a strong upholder of the issues involved in the late war. Early in life he connected himself with the Congregational church in Bristol, and afterwards with the church in Southington. His

interest in the church was evinced by his generous and continued support of every good work with which the society was connected, and many acts of charity, with which the public were never acquainted, endeared him to the poor among whom he worked.

In his practice he was progressive, and few men as constantly engaged as he was found so much time for study. He followed the calling of his profession from a love of it. He married, in 1835, Miss Parlia A. Perkins of Wolcott, by whom he had two sons, one of whom, with his widow, survive him.

In the fall and winter of 1877-8 a severe and fatal epidemic of diphtheria prevailed in the town, and Dr. Byington, while attending children suffering with the disease, contracted it himself. Other troubles ensuing, he died in a week from the time he was first attacked. He was buried at Oak Hill Cemetery, with appropriate Masonic honors. His death leaves a void in the profession, and in the hearts of the people that were endeared to him, that cannot be easily filled.

GEORGE ANSON MOODY, M.D., PLAINVILLE.

By E. B. Lyon, M.D., New Britain.

Dr. George Anson Moody was the oldest of three sons of Anson Moody, M.D., of Palmer, Mass., and Clarissa Collins of Hartford, Conn.; was born in Palmer, Mass., February 20, 1821, and died in Plainville, Conn., November 23, 1877, aged 56 years.

Dr. Moody's father, himself, and his youngest brother, John S. Moody, M.D., were all graduates of Yale Medical College, and his youngest son, Charles W. Moody, is now in the same school—class of '79.

Dr. Geo. A. Moody graduated in February, 1844, commenced practice in Plainville in June, 1844, married Nancy E. Sanford of North Haven, November 29, 1844, and remained without interruption in full practice in Plainville thirty-three years and five months—one month over one-third of a century.

Dr. Moody was thoroughly educated in his profession, had sterling common sense and good judgment, was a careful prescriber and a cautious surgeon, tender and sympathizing with the sick and

the sorrowing, honest and just to all, benevolent and generous to a fault, which sum of qualities made him preëminently useful and beloved in the community of which he was the central character.

In his intercourse with his professional brethren he was so generous as often to give an advantage which his unselfish nature and sense of professional honor would never allow him to take of another.

Without ostentation or ambition for professional preferment, he was called occasionally to preside over this county society, was often made a fellow of the State Medical Society, which he in turn represented in the National Medical Association, and in '76 acted as our delegate in the International Medical Congress.

Added to these professional qualifications and preferments he had traits of character which made him a marked man in the community.

With all his gentleness and tenderness nothing could turn him aside from what he thought was right and honest. Never counting the temporal cost, he identified himself with every good word and work. He was one of the foremost in the cause of education. He loved the welfare of the young, and delighted to make good things attractive to them.

His unswerving devotion to temperance lost him many a dollar. He hailed the reform not only as the effectual means of temporal salvation for the intemperate, but as the ally of every honorable enterprise, the friend of education, social comfort, national prosperity, and pure religion.

Another quality which ought not to be left out of the record was his *piety*. He became a decided Christian before he commenced the study of his profession, and as soon as he became a citizen of Plainville he connected himself with the only ecclesiastical organization then in the place, and identified himself from the first with Christian people, became a pillar in the Congregational church, and worked harmoniously with Christians of every name in efforts to save men and honor God. Dr. Moody died after a short illness from rheumatic carditis at the age of fifty-six, when just at the height of his influence and his usefulness. He leaves a wife, three children, and many friends to mourn his sudden death.

GEORGE O. SUMNER, M.D., NEW HAVEN.

By Wm. B. DeForest, M.D., New Haven.

Dr. George O. Sumner, a descendant of an old New England family, was born in the year 1800, at Gilead, Conn.

Of his early education, or first introduction to the study and practice of medicine, the writer has no information. That he was an esteemed and qualified practitioner, in the opinion of his professional brethren, seems apparent from the fact that upon him was conferred the honorary degree of Doctor of Medicine by Yale College, A.D. 1846.

As he had resided in New Haven only four years—having for many years prior to his removal to this city been engaged in the practice of medicine in Hartford—this early recognition of his worth and merit by the corporation of Yale College, gave Dr. Sumner the confidence of the community in which he dwelt. Here he faithfully and honorably, yet with marked individuality of character, labored until his declining health and increasing years admonished him to withdraw from the burdens of professional life and rest in the quiet retreat at Coventry, Conn., provided for him in the time of his necessity, by the open hand and sympathizing heart of his nephew, a resident of a distant city.

Here it was, at Coventry, that he was removed by apoplexy Nov. 24, 1877. In compliance with his well-known wishes, his remains were interred "among his own people." And he sleeps with his fathers in the old burial-place at Gilead, Conn., having never formed any other family relations.

The following is a copy of the record of the doings of the New Haven Medical Association on the occasion of his decease:

"*Resolved*, That by the death of Dr. Sumner the *Association* has been deprived of a steadfast and respected friend, *our profession* of a zealous and intelligent member, *and society* of an earnest, sober-minded, self-determined man—one who with small encouragement and unusual buffeting tried to do his duty."

As will be apparent from an anecdote soon to be related, Dr. Sumner was a man of great firmness of principle. He was strong in his convictions and just to them in his conduct. A Christian gentleman—a member of the First Baptist Church in this city, and for many years a deacon in that church. But the brief story now to be told is his best eulogy.

Dr. Sumner was once the object of a most aggravated slander. He resorted to the courts for the vindication of his character, in which he recovered, for that day, heavy exemplary damages. His adversary, still persistent, carried the case to the Supreme Court. Here the verdict and judgment of the court below were sustained. Yet, upon the offending party making public acknowledgment and retraction of his slander, Dr. Sumner forgave that party the penalty in which he had been mulcted, refunding every cent, except the bare legal costs. Such forgiveness of wrong, defended and persisted in as long as wrong was possible by him who inflicted it, is the act only of one who takes the rule of his conduct from Him who spake as never man spake, "Forgive us our trespasses, as we forgive those who trespass against us."

"The memory of the just is blessed."

[Dr. Sumner first commenced the practice of his profession in Eastbury, a parish of Glastonbury, but soon removed to Hartford, where he resided for about nine years. Removing to New Haven, he continued there until shortly before his death. He was often a fellow of the society, and for twelve years its treasurer.]

CHARLES A. GALLAGHER, M.D., NEW HAVEN.

By Wm. B. DeForest, M.D., New Haven.

Dr. Charles A. Gallagher was born at Baltimore, Md., December 12, 1835. His parents, while he was still an infant, removed to the city of New York, where his boyhood was passed and his preparatory and professional education acquired. He was graduated from the medical school of the New York University in 1856. He served as assistant physician in the medical and surgical departments of the hospitals on Blackwell's Island for one year, and in 1858 was deputy coroner in the city of New York.

Dr. Gallagher settled in New Haven, and on the organization of the 9th C. V., in 1861, he became its surgeon. This position he held for about three years, in the faithful and satisfactory performance of its duties, and was post surgeon at New Orleans for about eighteen months in 1862–3. Well did he merit "a testimonial of honor in grateful remembrance of the courage and patri-

otism by him displayed in the late war for the suppression of rebellion," conferred by the State of his adoption.

On the return of peace Dr. Gallagher resumed his practice in New Haven. He was chosen registrar of births, deaths, and marriages, in 1867–8, and again in 1871–3 for the town of New Haven.

In the profession of which he was a member Dr. Gallagher maintained a good reputation for skill and ability, for honorable and fair conduct towards his associates. By his patrons and employers he was beloved and honored. Both professionally and socially Dr. Gallagher was a man noted for his kindly feelings to all, for his affable manners and the courtesy he showed to every one. In the autumn of 1877, the sympathy of all who knew him was greatly excited by the severe accident which befell him. He was gathering fruit from a pear-tree in his garden, and missing his foothold, he fell to the ground. So severe was the injury to one leg, that amputation became necessary. A few days before his death he visited New York to be measured for an artificial leg, and on his return was in attendance at the county jail, of which he was the attending physician. From this last service he went to his home and to his bed, to die—after a brief illness—on the 9th of May, 1878, at 2 o'clock A. M. The cause of death was ulceration of the stomach and intestinal hemorrhage.

The funeral services were held at St. Patrick's Church, where he had long been a communicant. There were present and aiding in the last sad offices of respect, associate officers and soldiers of the 9th Reg. C. V., the New Haven Medical Association, and a delegation of children from St. Francis Orphan Asylum.

Dr. Gallagher leaves a son and five daughters.

HANFORD L. WIXON, M.D., NEW HAVEN.

By Wm. B. DeForest, M.D., New Haven.

Dr. Wixon was born January 16, 1844, at Bridgeport. Removing to New Haven, he passed some years as an apothecary's clerk, and when the hospital was used by the U. S. Government for the care of the sick and wounded in the late war, he became medical

cadet for nearly three years. He then studied medicine regularly, graduating at Yale Medical School, 1869.

He settled in New Haven, and acquired a large practice among the lowly and destitute, whose calls he never refused, and in whose service he wore out his life. At his funeral a spectacle was presented not often seen, as the sons and daughters of want, of many a race and color, crowded around the dead body of one whose ministrations of love would never more alleviate the miseries of their lives.

He died June 30, 1877, from malarial fever, complicated with bronchitis resulting in pneumonia from exposure.

The virtues of his character secured for him a warm circle of friends, and the respect and admiration of all who knew him.

JOHN DEACON, M.D., WATERBURY.

By E. L. Griggs, M.D., Waterbury.

Dr. John Deacon was born in New Orleans, but early in life removed to Connecticut, receiving his preliminary education at Monson Academy, and medical with Dr. Eli Ives of New Haven, and the Yale Medical School, graduating in 1847. After serving a term at Bellevue Hospital, he settled in Waterbury, where he remained until his death. He married twice; first, a daughter of Dr. Bulkley of Waterbury, who died a year after marriage; second, a daughter of Edward Sparks of Waterbury, who died eight years ago, leaving six children.

Dr. Deacon was a member of St. John's Episcopal Church. He was an indulgent father, a good citizen, and a practical christian; a friend to the poor. He had been in failing health for several years, but was seized suddenly with urgent symptoms while attending a patient; he was conveyed to his home, and death soon supervened, June 9, 1877, in the 50th year of his age.

ASA J. DRIGGS, M.D., CHESHIRE.

By Wm. B. DeForest, M.D., New Haven.

Died, in Cheshire, March 16, 1878, Asa J. Driggs, M.D., in the 75th year of his age. On the 18th of March, his funeral was solemnized at St. Peter's church. So ends the life of another of our members. Through the aid of his kindred, and especially from an "In Memoriam" sketch from the pen of the Rev. Dr. Horton of Cheshire, the following has been gathered.

The ancestors of Dr. Driggs came from England to Saybrook A.D. 1712. His father was a sailor, in command of a ship at Lisbon, Portugal, who married the daughter of the British Consul, a young lady of 15 years, who became the mother of the subject of this memoir.

Dr. Driggs was born in Middletown, Conn., on or about the year 1803, and when about sixteen years of age he became a pupil at the Episcopal Academy of Connecticut, of which, for many years afterwards, he was a trustee. He entered the medical department of Yale College, graduating in 1826. "After his graduation he commenced practice in Cheshire, and in 1828 married the daughter of the Rev. Reuben Ives, then rector of St. Peter's."

His wife died Oct. 29, 1829, leaving one son, who still survives —Theodore I. Driggs of Waterbury, Conn. Directly after the death of his wife, Dr. Driggs received an offer to go to the Island of Cuba, which he accepted, and there spent some time in the practice of his profession.

From Cuba, it seems evident, from facts in the possession of the compiler, that he found his way to Trinidad, where, in 1831, "he was practising as a physician, and had several plantations under his care."

Dr. Driggs used to be full of anecdotes of planters and British officers, being often a guest at their houses, and he used to say that a shingle was always placed within easy reach of every Yankee, so that *each might have something to whittle*.

Finding that the climate did not agree with his health, he returned to Cheshire after a few years, where, with the exception of a very short period, he resided till his death.

"Dr. Driggs possessed marked characteristics. He was somewhat eccentric in his habits, an able and successful practitioner, affable in manner, of a humorous disposition, and possessing a large fund of amusing anecdotes."

Not long after the death of his aged mother and sister, he gave up practice, and went to reside with his son in Waterbury; but having a longing for his old home, he returned to Cheshire, much impaired in his health and mind by a shock of paralysis, which had occurred during his absence. Although able to be about the streets, and to attend church, he gradually grew weaker. His love to the church and its services was touching in the extreme. On the first Sunday of March he was at Holy Communion, and on the Sunday before his death, was in his seat in church. The end came suddenly. On the morning of his death, he rose early as usual, and though feeble, was able to start on his accustomed walk. In a very short time he was found lying upon the ground in an unconscious state, and in a few hours he passed away.

JOHN DAGGETT MEERS, M.D., NAUGATUCK.

By E. S. Meers, M.D., Naugatuck.

John Daggett Meers was born in Hartford, Conn., on the 28th of February, 1794. At a very early age his parents removed to New Haven, and from thence to the State of Georgia. When he was thirteen years old, his father and mother both died with yellow fever, thus leaving him an orphan. After the death of his parents he returned to New Haven, and was taken into the family of his uncle, Henry Daggett, at whose hands he received a liberal education. He fitted for college at the Weston Academy, and entered Yale in 1810 to graduate with the class of 1814. For quite a period after leaving college he taught the Wallingford Academy. He then commenced the study of medicine with Dr. Shelton of Cheshire, with whom he completed his medical studies. He was licensed to practice medicine by the Green County Medical Society on the 10th of July, 1818, at Catskill, N. Y. He began practicing in New York city, where he remained until 1824, when the death of Dr. Hull left this town (then Salem Bridge) without a physician, and at the suggestion of Dr. Shelton, Dr. Meers removed to Naugatuck. He continued to practice here until 1845, at which time he moved to Blackwoodtown, N. J., where he practiced until 1847. He then returned to Naugatuck, where he resided the remainder of his life. Dr. Meers was twice married. By his first

marriage he had three children, Dr. R. L. Meers, who is now practicing medicine in Burlington, Ohio, being the only survivor of the three. By his second marriage nine children were born, four of whom, together with his second wife, survive him. He practiced medicine for over half a century with very few interruptions, as it was his fortune to enjoy good health. The last few years of his life he felt that his age unfitted him for practice, consequently he refused making calls entirely. During the winter preceding his death he was quite feeble in body, and did not go out of doors for several months. When spring opened he seemed for a time to improve in strength, and began again to walk out. On the Tuesday before his death he took a longer walk than usual, which greatly fatigued him. On the following morning he complained of pain in one side, which was soon relieved. The brain became affected, delirium set in, and he lingered until Saturday morning, the 19th of May, when he quietly went to his rest, at the ripe old age of eighty-three years.

SETH SMITH, M.D., NEW LONDON.

By Isaac G. Porter, M.D., New London.

Seth Smith, M.D., son of Dr. John L. and Fanny (Strickland) Smith, was born in East Lyme, October 14, 1823. His father being a physician, he was conversant with the active duties of the profession, and imbibing a love for the same, he commenced its study at an early age, graduating at the New York University in 1845. He soon after established himself in this city, where, possessing an agreeable person and earnest manner, his prospects were favorable; but he was early induced to enter the business of a druggist, a position which he occupied until December, 1871, a period of twenty-six years.

Inheriting a competency which he was enabled greatly to increase by his own judicious investments, he could at that time have selected for himself almost any path in life which promised him most enjoyment, or have spent his days in inactivity, or an idle pursuit after happiness. But the "doctrine of compensation" was exemplified in his case, as in many others, since, while he had numerous blessings, he experienced their counterpart in nights

disturbed by asthma, chronic cough, and other serious and permanent physical disabilities. His occupation deprived him of the air and exercise which he greatly desired, and while his pharmaceutical pursuits did not, of themselves, fit him for the practice of medicine, yet with his natural love for the profession, and his active mind, he was constantly preparing himself for its duties,—hence he made choice of it as the occupation for the remainder of his life, and his energy and ambition in this as in whatever he undertook being great, he soon had a good if not profitable business, especially among a class who had naught to render in return except "the prayers of the poor."

He was also "a man of affairs," manifesting good practical ability; hence, he more than once represented this city in the legislature of the State, and was at home placed on important building committees where judgment, energy, and economy were in demand. He was a professor of religion in the Congregational church, and a liberal supporter, financially, of the same.

It has been said that he inherited a competency, which, through his industry and financial talent, he had greatly multiplied. This circumstance constitutes, indirectly, the basis of a manifest claim to posthumous remembrance—a boon which now seems almost inevitable. He was twice married (his last wife surviving him), but in neither marriage was there any issue. After ample provision for those dependent on him, he bequeathed the residue of his estate for the establishment of the "Smith Memorial Home" for aged, infirm, and indigent women of good character, and residents of New London. The exact time when it is to commence operations is, by the terms of the will, left conditional upon the death of the principal annuitant, etc. Should events favor its immediate establishment, there would be an outlay or change of trust at least of more than $150,000, and, as the avails of the estate are very favorably invested, should no losses occur, the amount will in a very few years be doubled, or very possibly trebled, before the required transference of the trust to the city.

For a year past his health has been rapidly failing—incipient diabetes and increased asthmatic cough being the prominent symptoms. But he continued to answer every professional call by day or night, feeling that time was short, and he died literally at his post, since, while cupping a patient in his office, he was attacked with apoplexy, and, in less than four hours, had passed away, death occurring April 18, 1878, in the 55th year of his age.

FREDERICK MORGAN, M.D., COLCHESTER.

By Asibel Woodward, M.D., Franklin.

Frederick Morgan, the son of Elisha and Abigail Morgan, was born in Groton, Connecticut, on the 6th of September, 1791. He received his preliminary education at the academy at Plainfield, a school of high standing in its day, and entered Yale College in 1809, where he was graduated in the class of 1813. The class numbered seventy, and several of its members became widely known. After graduation he engaged in teaching, and in the autumn of 1816 he became a tutor at Yale. At the time of his appointment all officers of the college were required upon their induction to assent publicly to the Assembly's Catechism, and to the Confession of Faith received and established by the churches of Connecticut. He was thus inaugurated after evening prayers, by President Dwight, who was then in failing health. It is believed that Dr. Dwight did not subsequently visit the college chapel. Mr. Morgan proved a popular officer and a successful teacher, and in after years was spoken of with uniform respect and affection by the members of the class which he taught. Among the most cherished works of his library was a set of Van Swieten's Commentaries on Herman Boerhaave, presented to him as a testimonial by this class, and he expressed the wish that the volumes should, after his death, be deposited in the library of the college. He retired from the position of tutor in 1818, and was at the time of his death the oldest living ex-teacher of the college. Only three of his classmates survived him.

He read medicine with Doctor Minor of his native town, and presumably prosecuted his medical studies while acting as tutor. He was graduated from the Medical Institution of Yale College in 1819. In January of the following year he located in Colchester of this State, where he soon married a daughter of Dr. John R. Watrous. Dr. Morgan removed to Middle Haddam in April, 1824, where he remained till the spring of 1826, when he established himself in Middletown. After residing in this place till February, 1829, he removed to Ellington, whence he returned to Colchester in October, 1831. He continued to reside in Colchester till his death, and remained in the active practice of his profession till overtaken by the infirmities of age.

Dr. Morgan brought to his profession a high order of intellect, a sympathetic heart, and a conscientious fidelity to duty. He preserved throughout life the studious habits formed in his youth, and these, aided by a tenacious memory, gave him a well-stored and highly cultured mind. After his eightieth year he for a few days heard the classes in Bacon Academy during the absence of the principal, and surprised the pupils by his ready familiarity with Greek and Latin. Reading did not, however, supplant study at the bedside; and the habit of making his own deductions from carefully observed facts. His high sense of duty also impelled him to a conscientious investigation of each individual case. His patients felt that with professional skill he brought to them a heart tenderly alive to suffering, and his kindly sympathetic face brought sunshine to many a darkened home. The poor had always a friend in him. He gave them freely his professional skill, and often went beyond his means in supplying them with food and raiment.

Though actively devoted to a laborious profession, Dr. Morgan was prominent in all efforts for the social and moral advancement of the community. He was elected a trustee of Bacon Academy in 1823, and served in that capacity till his death, except for the seven years when he was away from Colchester. The academy always had a warm place in his affections, and he was often mainly instrumental in procuring for it the talented instructors who in former years gave so excellent a reputation to the institution.

He possessed marked antiquarian tastes, and was the standard authority on all matters of local history. In the early years of his residence at Colchester he was familiar with the men who had witnessed the scenes of the Revolution, and who in their turn had in their boyhood known the founders of the town. Dr. Morgan's taste led him to acquire whatever information he could from these sources, and his mind, aided by a retentive memory, became a storehouse of local history. It is to be regretted that he did not commit to paper his knowledge of early men and times, for many valuable memories lie buried in his grave. "But happily there are some things which he has aided to preserve. He was fond of old records that related to the church or society, and his handwriting, round, even, smooth, and almost as legible as print, has embalmed many names and dates, which he copied with no small labor from less orderly and often indistinct manuscripts."*

* Sermon of Rev. S. G. Willard.

He united with the church at Colchester in 1824, and was for about forty years a deacon of the same. The faithful character of the man appears from the fact that for thirty-five years after he became an officer of the church, he was only once absent from the communion. After he had become too infirm to officiate at the communion service, he still, at the request of the church, retained his old seat at the right of the pastor.

Dr. Morgan retired from the active practice of his profession some years before his death, but up to the very last he retained a lively interest in passing events. While attending the burial of a friend in September, 1876, he exerted himself beyond his strength and brought on a painful affection of the heart. He obtained temporary relief, but it was evident that death might occur at any moment. He lingered till June 18th of the following year, when he died while quietly sleeping upon a sofa.

His wife is still living. They had six sons and two daughters. Three sons who reside in California, and a daughter whose home is in New London, survive him.

ELIJAH GREGORY, M.D., BRIDGEPORT.

Elijah Gregory was born at Danbury, Conn., Oct. 9, 1833. We have no record of his boyhood, or of his life previous to his commencing the study of medicine, except that his father was a farmer, and that he lived at home until he went into the office of Doctor Ezra Bennett of Danbury, with whom he studied for three years.

He attended two courses of lectures in Yale Medical School, where he received his degree in 1856.

He entered into partnership immediately after graduating, with Doctor Benjamin Welch of Lakeville, Conn., with whom he stayed one year, and then removed to Lenox, Mass., where he practiced for two years with good success. Two years more were spent in North Salem, N. Y., when, on account of failing health, he returned to Danbury, remaining there for a few months, until, in the fall of 1861, he settled in East Bridgeport, engaging in an active practice there until the organization of the Seventeenth Conn. Volunteers. He was commissioned as assistant surgeon of that regiment, in which capacity he served with great credit to

himself for nearly three years and until his regiment was mustered out of the service. After the close of the war he returned to his former field in East Bridgeport, living there and following his profession until his death, which occurred Oct. 9, 1877.

He died suddenly, but apparently not unexpectedly to himself, as he had made his will but a very short time previously, and in conversation with various friends had spoken of his willingness to die, seeming to have a premonition of such an event, without being able to assign any physical reason for such an apprehension.

On the day of his death he ate dinner as usual, and as was his custom, laid down to rest in his office. He had retired from the table but a few minutes when his wife heard a noise as of some one falling, and, hastening into the room, found him lying upon the floor in a condition of syncope, from which he died in a very few minutes.

Doctor Gregory was well known in Bridgeport as being extremely sensitive and honorable in his dealings with the profession, and as having a generous, social nature, very considerate of the feelings of others; he often felt hurt at the apparent ingratitude of his patients, especially when coming from members of his own church.

Early in life he united with the Episcopal Church, and continued to be an exemplary member until his death.

He married Miss Josephine Shepard of Bethel, Conn., who, with an only son, survives him.

GEORGE DYER, A.B., M.D., TRUMBULL.

By George F. Lewis, M.D., Bridgeport.

George Dyer was born in Windham, Aug. 1, 1802, and died in Trumbull, May 8, 1878. He was a son of Benjamin, and grandson of Col. Eliphalet Dyer of Windham. He graduated from Brown University in the class of 1821, and soon thereafter began the study of medicine in the office of Dr. Hunt in his native town, receiving the degree of M.D. from Yale College in 1827. He began his practice at Greenfield Hill, but at that time Dr. Rufus Blakeman was so acceptable to the people thereabouts as to leave small hope of success for another physician, and on the decease of

Dr. Daniel Ufford of Trumbull, he decided to remove to that town. There for more than forty-five years he steadily pursued his calling, and won the respect and confidence of the whole community. After the death of Dr. Middlebrook, about twenty years ago, until recently he had little or no opposition. He once represented his town in the legislature, but he sought office oftener for others than himself. He married when over sixty years of age, but had no children. His wife survives him. He gradually relinquished his practice some five years ago, owing to declining mental and physical vigor.

RALPH DEMING, M.D., SHARON.

By H. M. Knight, M.D., Lakeville.

Dr. Ralph Deming died at his residence in Sharon, July 21, 1877, in the 79th year of his age. Dr. Deming left but little written material with which a stranger can meddle in the efforts to form an estimate of his early life. I am indebted to the Hon. C. F. Sedgewick and the Hon. John Cotton Smith for the knowledge I have obtained of his early history.

His first ancestor in this country was John Deming, who settled in Wethersfield as early as 1635. He was a prominent man, often a member of the colonial legislature from 1649 to 1661, and his name appears in the charter of 1662.

"The wife of this gentleman was a daughter of Richard Treat, also an early settler of distinction, and sister of Gov. Robert Treat, well known for his civil and military record, and for fifteen years the Chief Magistrate of the Connecticut Colony."

Dr. Deming's father came from Saybrook to Sharon in 1782. Dr. Deming was born Oct. 19, 1798. He received a good academic education for that day, and studied Latin under the special tuition of the now venerable Charles F. Sedgewick, Esq.

He read medicine with Dr. John Sears, and attended medical lectures at New Haven, receiving a license to practice medicine and surgery Feb. 25, 1824.

He returned to his native town and commenced his professional life, although there were then several physicians in Sharon; he quickly obtained a fair share of the public confidence and support.

He married Miss Mary T. Cornwall of Patterson, New York, June 5, 1827, who survives him. They had four children, two sons and two daughters. One son and one daughter are now living.

Only the older members of our profession can adequately estimate all that is embraced in the simple statement that for more than fifty-three years the subject of this sketch was an earnest, active, beloved physician, settled in one of the large townships of our mountain county. The happy possessor of good health, a worthy ambition, and a cheerful willingness to comply with all demands for his services, we can hardly conceive the sum total of labor he performed, or fatigue he endured.

I think it safe to conclude that Dr. Deming took a somewhat prominent position in the community while yet in early manhood.

My acquaintance with him began more than a quarter of a century ago, and he was then one of the most prominent men in the northwest portion of the State, both professionally and politically.

He possessed more than average natural ability. Although in his early training he lacked the advantages of the medical students of the present day, I believe he remained a *student* through life. He was a good thinker and a careful observer. He formed distinct opinions of a case of disease, and was ready to give reasons for his opinions. His judgment was generally sound, and his younger brethren considered him a wise and safe counselor.

His motives were right, and he thoroughly believed in the power of conscientious action in the daily ministrations of his profession.

"Character, Christian character," he used to say, "adds to the ability and power of the physician."

He was very regular in his attendance at the meetings of this Medical Society until the infirmities of age began to weigh heavily.

He was often a Fellow of the State Society, and had long been a permanent member of the American Medical Association.

Dr. Deming was fond of agricultural employments and improvements. He acquired a large landed estate, and when not busy in his practice he delighted in directing the operations of his farm. For the encouragement of our younger brethren, I take great pleasure in recording the fact that, although a country doctor, and although he began life with absolutely nothing, he died a rich man.

He was a member of the legislature in 1835, in 1839, and again in 1867. He was a member of the State Senate in 1853, and again in 1854.

But the crowning glory of his life is found in the fact that he

was a high-minded Christian gentleman. In early manhood he became a member of the Episcopal Church, and for twenty-seven years had been a warden. He was anxious to promote its interests, and generous in support of it.

The memory of a good man is blessed.

GAMALIEL ST. JOHN, M.D., GAYLORDSVILLE.

By Charles F. Couch, M.D., Gaylordsville.

Dr. St. John was born in Ellsworth, Conn., September 2, 1804, and died there August 15, 1877, nearly seventy-three years of age.

He was the son of a respectable farmer, received his early education under the direction of Rev. F. Gridley of Ellsworth, and commenced the study of medicine with Dr. Clark Chapman of Sharon, graduating at the Yale Medical College in 1827. He studied and practiced with Dr. C. Hurd of Northeast, N. Y., for about a year, settling in Gaylordsville, Conn., June, 1828, where he remained during his active professional life.

He was compelled to teach for awhile, and to practice close economy, and doubtless the habits then formed contributed towards the accumulation of the handsome competency he had at his death. He soon acquired an extensive practice; he was a close observer, possessed of an excellent memory, was well read, careful and deliberate in his practice, gentle and self-possessed. His relations with his professional associates was invariably pleasant; he was a member of the Litchfield County Society, in which he took a warm interest, recommending it to the attention of the writer, and advising his joining. Few men stood higher in the general esteem; he was twice sent to the legislature, was not ambitious politically, but often filled offices of trust and honor.

He was never married. In 1861 he was attacked with hemorrhage from the lungs, from the effects of which he never fully recovered. He removed to Ellsworth in the summer of 1873, living with his sister. He died of softening of the brain.

B. D. MAGUIRE, M.D., MIDDLETOWN.

By Elisha B. Nye, M.D., Middletown.

Bernard D. Maguire was born in St. Johns, Province of Quebec, Canada, February 2, 1849. He was educated at St. Mary's College, in the city of Montreal, and at McGill University, from which institution he graduated in March, 1873, receiving the degrees of M.D. and C.M. In June of the same year he commenced practice in the city of Middletown, where he resided until, on account of failing health, he returned to his father's residence in Joliette, Canada, in March, 1878, where he died April 3d of the same year.

Although Dr. Maguire's professional life was a brief one, he gave evidence while in Middletown of being a well educated physician. In his intercourse with his professional brethren he was always courteous and honorable; in the community, gentlemanly in his bearing, making few if any enemies, and many friends. Embarrassed as he was by occasional interruptions in his business from ill health before his final departure from Middletown, he had nevertheless secured a larger patronage than is commonly attained by one of no greater age and experience, and which would undoubtedly have been extended had his life and health been continued. His early death is lamented by a large circle of his former friends and patrons.

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Hartford, G. B. Hawley,* G. W. RUSSELL, David Crary,* P. W. Ellsworth,* E. K. HUNT, J. S. Butler,* J. C. Jackson, A. W. BARROWS, P. M. Hastings, W. H. Tremaine,* Lucian S. Wilcox, Henry P. Stearns, Irving W. Lyon, Melancthon Storrs, Horace S. Fuller, John O'Flaherty, Nathan Mayer, Wm. M. Hudson, George C. Jarvis, W. A. M. Wainwright, David Crary Jr., Geo. F. Hawley, J. B. Lewis, D. T. Bromley, George P. Davis, C. W. Chamberlain, Jas. Campbell, G. W. Avery, W. Shaw Bowen, George E. Abbott, H. P. Atherton, Eli Warner, C. E. Froelich, John Dwyer, Harmon G. Howe, Joseph A. Coogan, W. T. Bacon, W. W. Knight, R. H. Tiffany, C. W. Page, T. D. Crothers, Geo. L. Parmele, R B. Talbot.

Berlin, E. Brandegee.

Bloomfield, Henry Gray.

Bristol, Henry E. Way.

Broadbrook, E. K Leonard.

Canton, Collinsville, Geo. R. Shepherd, G. F. Lewis.

East Hartford, S. L. Childs,* L. W. McIntosh.*

East Windsor Hill, Sidney W. Rockwell,* William Wood.

Warehouse Point, Marens L. Fisk.

Enfield, Thompsonville, Edward F. Parsons, Rial L. Strickland.*

Farmington, Frank Wheeler, Charles Carrington.

Plainville, T. G. Wright.

Granby (North), Francis F. Allen,* G. W. Edwards.

Glastonbury, H. C. Bunce.

Buckingham, G. A. Hurlburt.

South Glastonbury, H. M Rising.

Manchester (North), R. M. Griswold.

South Manchester, J. N. Parker.

New Britain, B. N. Comings, S. W. Hart, Geo. Clary, E. B. Lyon, J. S. Stone, Erastus P. Swasey, M. J. Coholan.

Rocky Hill, R. W. Griswold.

Simsbury, G. W. Sanford,* R. A White.*

Southington, I. P. Fiske, G. W. Steadman.

Suffield, J. K. Mason, William H. Mather.

West Hartford, Edward Brace.*

Wethersfield, A. S. Warner.

Windsor, S. A. Wilson, Newton S. Bell.

Poquonock, R. E. Ensign.

Windsor Locks, S. R. Burnap.

* Over sixty years of age.

NEW HAVEN COUNTY.

S. G. HUBBARD, M.D., of New Haven, President.

ALFRED NORTH, M.D., of Waterbury, Vice-President.

C. W. Gaylord, M.D., of Branford, Clerk.

W. R. Bartlett, M.D., of New Haven, Corresponding Secretary.

Censors.

G. B. Farnham, M.D., W. L. Bradley, M.D., W. R. Bartlett, M.D.

New Haven, E. H. Bishop,* Levi Ives, P. A. JEWETT,* David L. Daggett, David A. Tyler, HENRY BRONSON,* E. A. Park, S. G. Hubbard, C. A. Lindsley, John Nicoll, Moses C. White, H. Pierpont, Leonard J. Sanford, Edward Bulkley, W. B. DeForest,* F. L. Dibble, T. Beers Townsend, T. H. Bishop, Henry A. DuBois, Francis Bacon, W. L. Bradley, A. E. Winchell, H. A. Carrington, L. M. Gilbert, Robert S. Ives, Evelyn L. Bissell, F. J. Whittemore, Arthur Ruckoldt, Stephen H. Bronson, Willis G. Alling, Frank Gallagher, Walter R. Bartlett, Walter Judson, Ira S. Smith, D. C. Leavenworth, George B. Farnam, J. F. Lines, Frederick Bellosa, J. W. Phelps, S. H. Chapman, William H. Hotchkiss, I. R. Sanford, J. F. C. Foster, F. O. White, Wm. H. French, B. S. Lewis, E. L. Thomson, W. H. Carmalt, M. A. Cremin, T. P. Gibbons, T. H. Russell, James J. S. Doherty, F. H. Whittemore, C. P. Lindsley, H. Fleichmer.

Fair Haven, Charles S. Thomson,* W. H. Thomson, Wm. M. White, S. D. Gilbert.

Westville, J. W. Barker.

Derby, Charles H. Pinney.

Birmingham, Ambrose Beardsley,* G. L. Beardsley.

Branford, Newton B. Hall, C. W. Gaylord.

Stony Creek, Justin Smith.*

North Branford, E. A. Wood.

Cheshire, M. N. Chamberlin.

Guilford, Alvan Talcott,* G. P. Reynolds.

Hamden, E. D. Swift, O. F. Treadwell.

Madison, D. M. Webb.

Meriden (West), B. H. CATLIN,* Asa H. Churchill, Frederick J. Fitch, C. H. S. Davis, Charles H. Gaylord, N. Nickerson, A. W. Tracy, E. M. Child, E. T. Bradstreet.

Milford, Hull Allen,* L. N. Beardsley, Thomas Dutton,* Wm. H. Andrews.

Naugatuck, E. S. Meers.

North Haven, R. F. Stillman,* R. B. Goodyear.

Orange, West Haven, J. Martin Aimes, John F. Barnett.

Oxford, Lewis Barnes.

Seymour, Thomas Stoddard,* S. C. Johnson,* Joshua Kendall.*

Southbury, A. B. Burritt.*

South Britain, N. C. Baldwin.

Wallingford, Nehemiah Banks, B. F. Harrison, H. Davis, J. D. McGaughey.

Waterbury, G. L. Platt,* Thomas Dougherty, Alfred North, Edward L. Griggs, S. C. Bartlett, H. E. Castle, E. W. McDonald.

* Over sixty years of age.

NEW LONDON COUNTY.

ASHBEL WOODWARD, M.D., of Franklin, President.

F. N. Braman, M.D., of New London, Clerk.

Censors—I. G. Porter, M.D., A. B. Haile, M.D., L. S. Paddock, M.D.

New London, ISAAC G. PORTER,* Robert A. Manwaring,* A. W. Nelson, F. N. Braman, Henry Potter, J. G. Stanton.
Bozrah, Samuel Johnson.*
Franklin, ASHBEL WOODWARD.*
Griswold, George H Jennings.
Groton, Mystic River, A. W. Coates,* John Gray.
Lebanon, W. P. Barber.
Montville, William M. Burchard.
Mystic, Mason Manning,* Albert T. Chapman, Frank A. Coates.
Mystic Bridge, E. Frank Coates.
Norwich, Elijah Dyer,* Elisha Phinney,* A. B. Haile,* Lewis S. Paddock, Charles M. Carleton, Wm. S C. Perkins, Patriek Cassidy, E. C. Kinney, S. L. Sprague, L. B. Almy, A. Peck.
Greeneville, William Witter.
Old Lyme, George W. Harris.
East Lyme, Elisha Munger.
Stonington, Chas. N. Brayton, Geo. D. Stanton.
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Darien, Samuel Sands, R. L. Bohannan.
New Canaan, Lewis Richards,* Wm. G. Brownson.
Bethel, A. D. Barber.
Greenfield Hill, M. V. B. Dunham.
Monroe, E. M. Beardsley.
Norwalk, Samuel Lynes, James G. Gregory, James E. Barbour, W. A. Lockwood, John W. McLean, Jno. C. Kendall, Robert Nolan.
South Norwalk, M. B. Pardee, R. L. Higgins, John Hill, W. C. Burke, Jr.
Ridgefield, O. S. Hickok, Wm. S. Todd.
Reading, M. H. Wakeman.
Southport, Justus Sherwood,* C. H. Osborn.
Stratford, Edwin D. Nooney.
Stamford, N. D. Haight.*
North Stamford, Geo. W. Birch, W. H. Trowbridge.
Trumbull, Thos. Reid.
Weston, F. Gorham.
Westport, George B. Bouton, F. Powers.
Huntington, Gould A. Shelton.
Sandy Hook, Wm. C. Wyle.
Wilton, A. E. Emery.

*Over sixty years of age.

WINDHAM COUNTY.

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Censors—S. HUTCHINS, M.D., T. M. HILLS, M.D., E. BALDWIN, M.D.

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BROOKLYN, James B. Whitcomb.*
SOUTH CANTERBURY, Elijah Baldwin.
CHAPLIN, Orrin Witter.
HAMPTON, Dyer Hughes.*
KILLINGLY, Asahel E. Darling.
South Killingly, Daniel A. Hovey.*
West Killingly, Samuel Hutchins, R. Robinson, Thomas Graves.
East Killingly, Edwin A. Hill.
PLAINFIELD, Moosup, Wm. A. Lewis.
Central Village, Chas. H. Rogers, E. H. Davis.
POMFRET, Lewis Williams.*
PUTNAM, H. W. Hough,* John Witter, John B. Kent, Omer LaRue, F. X Barolet.
THOMPSON, LOWELL HOLBROOK.
North Grosvenordale, J. C. Lathrop.
WESTFORD, Farnam O Bennett.
East Woodstock, John Cotton.
West Woodstock, Milford Bradford,* A. S. Leonard.
WINDHAM, E Huntington.*
Willimantic, Fred. Rogers, T. Morton Hills, L. F. Bugbee, O. B. Griggs, C. J. Fox.

LITCHFIELD COUNTY.

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LITCHFIELD, H. W. BUEL, H. E. Gates, W. J. Beach, Wm. Deming, J. J. Newcomb.
CANAAN, C. W. Camp.
Cornwall Bridge, Elias B. Heady.
West Cornwall, Edward Sanford.
MORRIS, Garry H. Miner.*
NEW MILFORD, J. K. Bacon.
Gaylordsville, Charles F. Couch.
GOSHEN, J. H North.
HARWINTON, Virgil Buel, W. P. Swett.
NORFOLK, Wm. W. Welch, J. H. Stevens.
THOMASTON, Wm. Woodruff,* Ralph S. Goodwin, A. G. Heaney.
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Lakeville, W. Bissell, H. M. Knight.
SHARON, William W. Knight.
Wolcottville, T. S. Hauchett, L. H. Wood, J. W. Phelps.
WARREN, John B. Derrickson.
WASHINGTON, Remus F. Fowler,* Orlando Brown.
New Preston, Edward P. Lyman.
WATERTOWN, W. S. Munger.
WINCHESTER, West Winsted, James Welch,* John W. Bidwell.
WOODBURY, Harmon W. Shove, Francis W. Brown.
Terryville, J. H. Trent.

* Over sixty years of age.

MIDDLESEX COUNTY.

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Censors—S. W. TURNER, M.D., GEORGE W. BURKE, M.D., E. B. NYE, M.D.

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CHATHAM, Middle Haddam, Albert B. Worthington.
East Hampton, Albert Field.
CHESTER, Sylvester W. Turner.
CROMWELL, IRA HUTCHINSON.*
DURHAM, R. W. Mathewson.*
ESSEX, Alanson A. Hough,* Charles H Hubbard, C. L. Blake.
HADDAM, Miner C. Hazen, Selden W. Noyes.
Moodus, A. W. Bell.
OLD SAYBROOK, J. H. Granniss, T. B. Bloomfield.
PORTLAND, O. A. Sears, Cornelius E. Hammond.
SAYBROOK, Deep River, Edwin Bidwell.
WESTBROOK, G. C. H. Gilbert.*
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GILBERT H. PRESTON, M.D., of Tolland, Clerk.

Censors—G. H. PRESTON, M.D., WM. N. CLARK, M.D., S. G. RISLEY, M.D.

TOLLAND, G. H. Preston.
BOLTON, CHAS. F. SUMNER.
COLUMBIA, J. LaPierre.
COVENTRY, Maurice B. Bennett.
South Coventry, Henry S. Dean.
ELLINGTON, J. A. Warren.
MANSFIELD, Wm. H. Richardson.
STAFFORD, Wm. N. Clark.*
West Stafford, Joshua Blodgett.*
Stafford Springs, C. B. Newton.
VERNON—Vernon Depot, A. R. Goodrich.
Rockville, Stephen G. Risley, Francis L. Dickinson, Frederick Gilnack.
WILLINGTON, Wm. L. Kelsey.

* Over sixty years of age.

REPORT OF COMMITTEE OF EXAMINATION.

By Irving W. Lyon, M.D., Clerk.

The Committee of Examination met at the Medical College in New Haven, June 26, 1877.

There were present on the part of the State Medical Society, G. L. Platt, M.D., George C. Jarvis, M.D., D. A. Cleaveland, M.D., G. H. Preston, M.D., Irving W. Lyon, M.D.; and on the part of the College, Professors Silliman, Smith, Sanford, Hubbard, White, Lindsley, and Bacon.

The Dean of the Faculty, Dr. Lindsley, announced that Mr. C. B. Farnsworth of Norwich had applied to be examined for a license to practice medicine and surgery, and that his examination must be made and acted upon by the members of the examining board appointed by the State Medical Society. In the absence of the president, Robert Hubbard, M.D., the members from the State society organized by electing Dr. G. L. Platt, president, and proceeded to examine Mr. Farnsworth. He had attended one full course of lectures at Yale Medical College, in 1875–6, and been engaged in the practice of medicine for a considerable time. After the examination the committee voted to grant him a license, by a major vote; the minority protesting, on account of his failure to pass an examination which could be called satisfactory.

The combined board then organized by electing Prof. Silliman President.

Mr. Franklin W. Hall, on account of collateral studies pursued, and general good scholarship, petitioned the board to be admitted to an examination for a degree, although he had not fully made up the required three years of study. It was voted that he be admitted to an examination.

The following gentlemen were then examined and recommended for the degree of M.D.,

Franklin W. Hall, Thesis, The Intestinal Parasites of Man.

William Collin Welch, Thesis, Pneumonia.

The following gentlemen were then examined and passed in the special departments annexed to their respective names:

John Philip Henriques, Materia Medica and Physiology.

Charles Purdy Lindsley, Ph.B., Materia Medica and Therapeutics, Physiology and Surgery.

Herbert Warren Little, Chemistry, Physiology, and Materia Medica.

James Joseph Reilley, Anatomy.

Dudley Allen Sargent, B.A., Materia Medica and Therapeutics, Physiology and Chemistry.

It was moved by Dr. Platt that the standard of all special examinations be hereafter eight, instead of six, to exempt from further examination in the same departments.

Voted. Adjourned.

Pursuant to notice there were present, January 30, 1878, on the part of the Connecticut Medical Society, D. A. Cleaveland, M.D., and Irving W Lyon, M. D., who examined the papers of the candidates which were submitted for the inspection of the State committee.

The combined committee of examination convened at the Medical College, January 31, 1878.

There were present on the part of the State Medical Society, Robert Hubbard, M.D. President; G. L. Platt, M.D., G. H. Preston, M.D., D. A. Cleaveland, M.D., Irving W. Lyon, M.D.; and on the part of the College, Professors Silliman, Smith, Sanford, Hubbard, White, Lindsley, and Wilcox.

The vote of the last meeting, making eight instead of six the standard of special examinations, was reconsidered. It was voted: that students who are not yet candidates for immediate graduation, when examined in special branches, shall attain a standard of seven to exempt them from another examination in the same studies.

The following gentlemen were then examined and recommended for the degree of M.D.:

Henry Fleischner. Thesis, Nutrition.

John Philip Henriques. Thesis, The True Physician, with the Valedictory.

Charles Purdy Lindsley, Ph.B. Thesis, Chronic Parenchymatous Nephritis.

Dudley Allen Sargent, B.A. Thesis, The Moral Significance of Food.

Another candidate for the degree of M.D. was examined and rejected.

The following gentlemen were examined and passed in special branches:

George Jacob Augur. In Anatomy.

Scott Robert Baker. In Materia Medica.

George Tallmage Brown. In Physiology and Materia Medica.

Edward Everett Gaylord, B.A. In Chemistry, Physiology, and Materia Medica.

John Flavel Gaylord, B.A. In Physiology and Materia Medica.

Herbert Warren Little. In Therapeutics, Theory and Practice, and Obstetrics.

Max Mailhouse, Ph.B. In Anatomy, Chemistry, Physiology, and Materia Medica.

James Joseph Reilley. In Chemistry, Physiology, Materia Medica, and Therapeutics.

George Orrin Robbins. In Physiology and Materia Medica.

Walter John Smith. In Anatomy, Chemistry, Physiology, and Materia Medica.

Several students were rejected in special departments.

The following resolution was adopted after debate:

Resolved, That students who apply for examination in the elementary branches of medical study, shall first be examined, by special committee, in English branches, including algebra to quadratic equations, Balfour Stewart's Elementary Physics, Stewart's Natural Philosophy or its equivalent, and the Latin grammar and reader; and the Committee of Examination recommend the applicants to pass this examination before entering upon their medical studies.

Resolved, That this special committee shall consist of three members of the Faculty.

The following committee was then appointed: Professors White, Silliman, and Wilcox.

Dr. George C. Jarvis was appointed to address the graduates at the next public graduation: Dr. M. Storrs alternate. Adjourned.

In the evening public exercises were held in the Athenæum, when an oration was delivered by Henry Fleischner, and an address, with the valedictory, by John P. Henriques, each of the graduating class; also an address to the graduates by F. D. Edgerton, M.D.; after which the degrees were publicly conferred by the President, Rev. Noah Porter, D.D., LL.D.

IRVING W LYON, M.D., *Clerk.*

APPENDIX A.

MEMORIAL FROM THE NEW HAVEN MEDICAL ASSOCIATION.

To the President and Fellows of the Connecticut Medical Society.

The New Haven Medical Association sends a Memorial, with resolutions affixed.

For many years there has been no legislation by the State which in any important degree touches the relations of practitioners of medicine to the community.

In the early and better days of the Commonwealth, when the value of a thorough education was more generally appreciated as an indispensable qualification for physicians, the Connecticut Medical Society was, in 1792, authorized, under specific legal restrictions, to grant *licenses* to such persons as may pass a satisfactory examination, "and be found worthy to practice physic and surgery." Such was the degree of enlightenment and general intelligence among the people at this early period that, according to Miner, "It was difficult for a candidate for practice to find regular employ unless he had been licensed by this body, as a guaranty of his qualifications. Their requirements were found to be so reasonable, and a refusal to submit to them was such a mark of irregularity, and a consciousness of disqualification, that after eight or ten years the legislature disowned all pretenders by withholding from them the legal power of collecting their professional debts, unless they had been legally examined and approved." (Miner, Inaugural Address, 1837.)

In 1810–11, such was the growing appreciation by the people of the indispensable necessity of having a well-educated medical profession in every civilized State, that by an act of the legislature a Medical College was chartered, and was by law required to furnish the facilities for a medical education of a higher order than had

previously been accessible in the State—and it was empowered to confer, under strict requirements, the degree of Doctor of Medicine upon such persons as had completed a required course of study, and successfully passed an examination before an Examining Board, the majority of which was elected by this Society.

In 1848 the legislature granted a charter to the "Botanico-Medical Society," and conferred upon it the power to grant licenses to practice to such persons as on examination were found to be worthy to practice medicine according to the principles of that school. The Society was also authorized to establish a medical college, with power to confer degrees. Subsequently, in 1855, the Eclectic Medical Association was chartered, with similar powers; but four years later these two Societies were united, and have since been known as the Connecticut Reform Medical Association.

In 1864 the Homœopathic Medical Society was organized under charter from the legislature, and was also authorized under the same legal restrictions to grant licenses to practice.

Here, then, were three medical societies, authorized and required by the legislature to determine who among the aspirants for practice in their several distinctive schools were possessed of such qualifications as, in the judgments of their examiners, would render them worthy and safe physicians for those who might choose to employ them.

Consistency on the part of the legislature would seem to have required the simultaneous enactment of a law prohibiting any person who had not been either licensed by one or the other of these chartered societies, or who had not received the degree of Doctor of Medicine from some regularly chartered medical college, from practising medicine in this State. Unfortunately for the best interests of the people, no such law, so far as we know, has ever been enacted. As a consequence, all distinctions between the honest, educated, and most thoroughly qualified physicians of either of these recognized schools of practice, and the most ignorant camp-follower of a traveling show who may choose to assume the rôle of a "medical tramp," were broken down; and the people have ever since been left defenseless, except so far as their own intelligence would protect them, against one of the most demoralizing and destructive of those evil agencies that sap the foundations of morality, destroy the health and lives of the people, and against which, as a last resort, communities have sometimes felt obliged to organize for self-protection.

Within a few years the fact that has daily grown more portentous and overwhelming in its proportions, and which has in many States received the thoughtful attention of the best minds, is the unlimited freedom which is allowed to ignorant and unqualified persons to practice medicine.

In the early days of the Republic, when intelligence and education were the rule and ignorance the exception—when small communities could easily know the qualifications of its citizens, ignorant quacks were easily detected, and had little currency.

At present, however, in many of the populous states and cities, particularly in large manufacturing populations, it is plainly apparent that this great evil has reached a dangerous magnitude; and the attention of the intelligent public seems to be centered upon it as, next to intemperance, the greatest enemy of the human race.

The General Assembly of Connecticut has very wisely acknowledged the obligations of government to protect its citizens from all those evils from which the individual cannot protect himself, by legal enactments designed to secure the removal of unsanitary conditions and sources of disease and death, from private as well as public places; it restrains dangerous or destructive animals; it prohibits the individual from exercising his private rights to the detriment of his neighbors; but as yet it permits every bold, bad, ignorant man, possessing not the slightest medical knowledge—incompetent in everything but the brazen impudence of a quack—to assert himself without restriction or penalty as a qualified, trustworthy physician, and to take into his unclean hands the keeping of that most valuable capital of any community—the health of the people. We believe that the General Assembly, composed, as it usually is, of men representing the average integrity and intelligence of the State, only needs to become informed of the real nature of this great evil, and the destructive consequences that necessarily result from its continuance, in order to pass such wise laws as will speedily remove it from the commonwealth. Under the existing laws, or rather in the absence of any legal restriction upon the practice of medicine, the wandering medical tramp stands in Connecticut to-day before the law, precisely on the same plane with the most highly educated physician to whom the legislature has granted through its chartered institutions authority to practice—that is, the only recognition the law gives them is, that it holds them equally liable in damages in suits for "*mala-praxis.*" Is it any wonder, then, that for years it has been the boast of these

imposters that of all the New England and Northern States, Connecticut has yielded them the largest returns, and is for several reasons their most inviting field ?

In the State of New York, during the present session of the legislature, so much good work has been done that it seems beyond a doubt probable that a law will soon be enacted prohibiting the practice of medicine except by qualified persons, who can exhibit to the proper authorities legal evidence of their qualifications.

Massachusetts, on the north of us, has advanced its legislation on the same subject nearly as far, and it is morally certain that very soon there will be in that grand State no resting-place for an unqualified, ignorant practitioner.

In Vermont and Illinois very stringent laws are enforced with so much vigor that quacks are compelled to leave those States on all sides, and in such numbers are they moving that the adjoining States are proposing to enact similar laws for their own protection against an invading pest.

The situation of Connecticut is one peculiarly exposed to the migration of quacks of all kinds, and particularly to the predatory incursions of "*medical tramps*," and it is not too much to say that along the great lines of communication our towns are never free from the presence of some of the very worst specimens of this vagrant class. They travel sometimes alone, but frequently in gangs,—some of them have doubtless picked up stray items of medical information, and yet the most successful swindlers of them all have never had the slightest professional relations to medicine excepting through the outlawed diplomas of dead institutions, or of dead men, fraudulently obtained. They debauch the public morals by indecent lectures, and swindle the poor, the ignorant, and too credulous classes of their money under the false pretence of curing diseases of which they have no knowledge, and which their victims have never had;—they impair the health, ruin the constitutions, and in some instances destroy the lives of the unreasoning and unsuspecting invalids who have perhaps been decoyed into their graves by the favorable notices of some of the newspaper press.

Surely if there ever was in any State a great and dangerous social evil, affecting directly and indirectly the physical welfare of the entire population, and which ought to receive the immediate and most intelligent attention of the legislature, it is the *medical tramp nuisance of Connecticut*.

For the existing state of facts which now characterize the unfortunate relations of legitimate medicine to State law, it would be idle to deny that the educated medical profession is to some extent responsible; for the practical difficulties which are at once encountered when legislative action is asked for with regard to any subject having the slightest relation to medicine, disease, or even death itself, are found to depend upon the ignorance and prejudice of the popular mind, which can be removed by no agencies so appropriately as by educated medical men in their individual and associated relations to the public. Probably no State ever enacted laws for its protection against social, civil, or physical evils, until it had become convinced by painful and costly experience of its necessity.

The work of enlightening the uninformed—of removing prejudices, the result of early associations—and of convincing the people and their representatives, that in advocating and urging legislation for the protection of human life and health, the medical profession is laboring to secure the highest physical welfare of the entire community, requires much time and a persistency of effort that will not be easily discouraged.

In the opinion of this Association, the disgraceful and hitherto unheard of exhibition of quackery in its most offensive forms, by which our city has been for many months defiled, and for which the law has no penalty, offers by the wide publicity and unsparing censure that has been given it by the higher-toned newspapers of our State, an opportunity for uprooting the entire system of fraud, that should not be neglected.

If the educated physicians of Connecticut will enter upon the work of reforming this great social evil, in the same spirit of devotion to the public welfare that has always distinguished them as a class, we have no doubt that it will result in securing from the General Assembly such legal enactments as will increase the honor and good name of the State, and be hailed with satisfaction by every intelligent citizen.

We therefore commend to your favorable consideration and prompt action, this very important subject, with the accompanying resolutions, unanimously adopted, as expressing our earnest conviction that the united and intelligent action of the profession of the State should not be delayed.

RESOLUTIONS.

WHEREAS, There is nothing in the statute laws of Connecticut which prohibits any individual from publicly assuming the title and functions of a physician, without the least knowledge of medical science; and

Whereas, The perfect freedom thus guaranteed to quacks and itinerants from other States, to practice their frauds in this State without legal impediment, offers special inducements to this class of pretenders to select this State for their field of operations, greatly to the damage of the lives and property of its citizens; therefore

Resolved, That in the opinion of this Association, the best interests of the people, and the claims of public policy alike require that certain legal restrictions upon the practice of medicine should be enacted, at least to the extent of requiring that hereafter every practitioner of medicine shall be a graduate of a regularly chartered medical college; or shall have been licensed to practice by some one of the medical societies chartered by this State, and duly authorized to grant licenses.

Resolved, That these resolutions be signed by the officers of the Association; and be transmitted with the foregoing Memorial to the President and Fellows of the Connecticut Medical Society at their annual meeting; and that the Fellows from this county are hereby respectfully requested to use their influence to secure appropriate action thereon, to the effect that the subject may be brought by a suitable committee before the next General Assembly, in a well considered and practical bill for a public act, regulating the practice of medicine in the State.

The foregoing memorial and resolution were unanimously adopted by the New Haven Medical Association, May 13, 1878, and Drs. S. G. Hubbard and Thomas H. Russell were appointed a Committee to present them to the Connecticut Medical Society.

Signed, ALVORD E. WINCHELL, M.D.,
President.

THOMAS H. RUSSELL, M.D.,
Secretary.

PROCEEDINGS

OF THE

Connecticut Medical Society

1879.

Eighty-Eighth Annual Convention,

HELD AT

Hartford, May 28th and 29th.

Published by the Society.

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

HARTFORD, CONN

HARTFORD, CONN.:

Press of The Case, Lockwood & Brainard Company,

1879.

OFFICERS OF THE SOCIETY.

1879-1880.

PRESIDENT.

A. R. GOODRICH, M.D., VERNON.

VICE-PRESIDENT.

G. L. PLATT, M.D., WATERBURY.

VICE-PRESIDENTS, *Ex-Officio.*

R. W. GRISWOLD, M.D.
M. C. WHITE, M.D.
E. C. KINNEY, M.D.
WM. G. BROWNSON, M.D.
ELIJAH BALDWIN, M.D.
R. S. GOODWIN, M.D.
R. W. MATHEWSON, M.D.
S. G. RISLEY, M.D.

TREASURER.

F. D. EDGERTON, M.D.

SECRETARY.

C. W CHAMBERLAIN, M.D.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE

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

STANDING COMMITEES.

On Examination.

A. R. GOODRICH, M.D., *ex-officio.*
D. A. CLEAVLAND, M.D.
G. H. PRESTON, M.D.
M. STORRS, M.D.
JOHN WITTER, M.D.
JAS. E. BARBOUR, M.D.
J. G. STANTON, M.D.

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

WM. DEMING, M.D. C. B. NEWTON, M.D.
L. N. BEARDSLEY, M.D. ISAAC G. PORTER, M.D.
H. M. KNIGHT, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

D. H. NASH, M.D. L. HOLBROOK, M.D.
H. M. KNIGHT, M.D. R. S. GOODWIN, M.D.
B. N. COMINGS, M.D.

Committee of Publication.

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

Committee of Arrangements.

H. A. CARRINGTON, M.D., *Anniversary Chairman.*
A. E. WINCHELL, M.D.
S. H. BRONSON, M.D.

Dissertator.

W. H. CARMALT, M.D.

Alternate.

I. W LYON, M.D.

SUMMARY OF CONTENTS OF VOL. I.

THIRD SERIES, 1876—1879.

Report of Committee on Matters of Professional Interest.

Interesting Cases and Papers from County Societies.

1876.

1877.

1878.

1879.

PRESIDENT'S ADDRESSES AND DISSERTATIONS.

ESSAYS.

OBITUARIES.

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

The next Annual Convention will be held in New Haven, the 4th Wednesday in May, 1880, and remain in session during Thursday.

Copies of the Proceedings of previous years are for sale at the Secretary's office—1875 to 1879 at one dollar a copy; preceding years, fifty cents, such as are in stock.

PROCEEDINGS

CONNECTICUT MEDICAL SOCIETY—EIGHTY-EIGHTH ANNUAL CONVENTION.

The President and Fellows of the Connecticut Medical Society met at Central Hall, Hartford, May 28, 3 o'clock P. M.

Dr. C. M. Carleton of Norwich called the meeting to order promptly at the appointed hour, and announced the following Committee on Credentials: C. W. Chamberlain, M.D., Hartford; S. W. Turner, M.D., Chester; J. D. Nelson, M.D., North Stonington. The Committee on comparison of the registered list of Fellows present with the certificates of the County Clerks found the list correct, and so reported. On request of the Fellows from Fairfield county, the Convention voted that the name of N. E. Worden of Bridgeport be substituted for R. Bohannan, who could not be present. The report of the Committee was then accepted.

LIST OF FELLOWS, *Ex-Officio.*

President.

C. M. Carleton, M.D.

Vice-President.

A. R. Goodrich, M.D.

Vice-Presidents, Ex-Officio.

R. W. Griswold, M.D.	Elijah Baldwin, M.D.*
M. C. White, M.D.	R. S. Goodwin, M.D.
E. C. Kinney, M.D.	R. W. Mathewson, M.D.
Wm. G. Brownson, M.D.	S. G. Risley, M.D.

Treasurer.

F. D. Edgerton, M.D.

Secretary.

C. W. Chamberlain, M.D.

* Absent.

New York, May 12, 1879.

To the President of the Connecticut Medical Society.

My Dear Sir: In response to your communication of April 29, 1879, in which you say that "the Connecticut Medical Society would appreciate the honor of receiving a delegate from the Neurological Society," I would say that the Neurological Society appreciates the courtesy of the suggestion, and unanimously voted at its last meeting, held May 5, 1879, to send Prof. Wm. A. Hammond as its delegate.

I am, very truly yours,

William J. Morton, M. D.,
Rec. Sec. Neur. Society.

I feel to congratulate the Society that so eminent an authority as Wm. A. Hammond has been sent by the Neurological Society, and that he has consented to be present.

In relation to the proposed act relating to *itinerant practitioners* of medicine, I desire at this time, if the meeting will allow me, to express my own views.

I object to the action of the committee for the following reasons:

First,—Because the proposed act intends the corporation of the medical profession with twice its number of irregular practitioners in a board of censors. This gives to these schools the power, in spite of us, to license any one or every one to practice, and that besides with our implied indorsement. Even with the circumstances reversed, we cannot afford to infract our code—which forbids consultation with irregulars at the bedside—by conference with them in committee-rooms.

Second,—Because the provisions of this proposed act are calculated to bring upon the profession the undeserved opprobrium of the unthinking and ignorant. We shall be charged (as we have been charged) with jealousy and sordid motives, in attempting to exclude from practice all who are not of our belief. Reform is doubtless needed, and protection would be productive of far-reaching benefits; but we should neither take the initiative, nor should it be dictated by us. Let the public learn, in a school which has been wisely provided since the beginning of the world, for such as are patients, of those whom it is proposed to restrain, that their "doctors," whatever else they may possess, "have no health in them." The manifest superiority of a well-educated, skillful, and honest profession will eventually in this country (as it has long since abroad) influence the community to protect itself and exterminate charlatanism by such severe repressive measures as we ourselves would, in the present condition of public education and public sentiment, hardly presume to propose.

The establishment of the State Board of Health, as the result of the strong and persistent efforts of the profession, afforded us a subject for

self-congratulation last year. Its conduct and its services have been not only honorable in the highest degree to the profession, but of vast benefit to the community. I bespeak for the Board the support and assistance of the profession in maintaining its existence. The discontinuance of the Board would be a loss that the State should not be allowed to suffer if it can be prevented.

The conduct of coroners' inquests has for ages, I might almost say, been a subject of ridicule and contempt. Massachusetts, which is not infrequently foremost in good work, has of late made some radical changes in the laws governing these proceedings, which have gone far towards the reformation of abuses which Shakespeare satirized, but which English law has stupidly maintained. I recommend that a committee be appointed by this Society to examine the workings of the enactments to which I refer, and to urge upon the legislature of Connecticut the necessity for reform in the same direction.

The adulteration of articles of food is a great and growing evil in the State, and one of which this Society might properly take cognizance, as it is a frequent source of disease, more especially among the poorer classes. I recommend that a committee be appointed by this Society to study the enactments of Great Britain and France for the repression of this vicious business, and to memorialize the legislature that it afford similar protection to the people of this commonwealth. The law passed by the last legislature upon this subject is, perhaps, as extensive as the present condition of public sentiment and knowledge will sustain, and may serve as an entering wedge.

I would also recommend that the Society take some action upon the propriety of adopting the Metric System in the dispensing of medicine.

The following Committees were announced by the Secretary as appointed by the President :

On Unfinished Business.—Drs. E. C. Kinney, C. J. Fox, N. Nickerson, C. E. Hammond.

On County Resolves.—Drs. G. P. Davis, R. S. Goodwin, A. B. Worthington.

On Business.—Drs. P. A. Jewett, J. H. Stevens, C. W. Chamberlain, *ex-officio.*

On Honorary Members and Degrees.—Drs. M. C. White, Wm. Deming, N. Mayer.

Auditing Committee.—Drs. E. L. Griggs, S. G. Risley.

To Nominate Essayists.—Drs. P. A. Jewett, E. B. Lyon, W. J. Beach.

The Committee on Unfinished Business reported unanimously in favor of the two proposed amendments which were referred from last year, as follows :

CHAPTER II, Section 5.—The second paragraph is repealed, and the following substituted: "The Secretary shall send due notices of the annual meeting to each member, and publish notice of the same in three of the daily papers printed in this State."

CHAPTER IX.—Expulsion of Quacks.—Said paragraph is hereby repealed, and the following substituted: "Each County Association shall have power to examine, discipline, or expel (in the manner prescribed in Sec. 7, Chapter IV, to which this shall be annexed), any member professing or avowing to practice allopathy, homœopathy, hydropathy, or according to any exclusive system or dogma."

The Special Committees on itinerant practitioners and amendments to the charter of the Yale Medical School were instructed to report directly to the Convention. On motion of Dr. Chamberlain, the report of the committee, with reference to the first amendment, was accepted. There was then considerable discussion on the second amendment. Dr. Storrs requested the Secretary to read the paragraph it was proposed to repeal. The Secretary read as follows:

"Each County Meeting shall have the power to examine and immediately expel any member notoriously in the practice of homœopathy, hydropathy, or any other form of quackery, without any formal trial, the same to be ratified by the succeeding Convention, any by-laws to the contrary notwithstanding."

Dr. Storrs said he preferred the law as it stood and did not consider that it needed any revision; that the power to examine implied a trial; that the powers were definitely expressed, and should be possessed for use when necessary.

Dr. Chamberlain thought the provisions which allowed expulsion without trial a disgrace to the society, and such star-chamber proceedings a relic of barbarism.

Dr. Jewett said that as he framed and introduced the resolution originally, in 1851, he naturally was interested in it; that it fully met his present views, and should not be changed.

Dr. White said that summary action under this rule had been taken several times, and it certainly was desirable that but one uniform system of discipline should prevail as provided by the by-laws preceding, this which had been a special resolution.

Dr. Griswold moved to amend so that the resolution should read, "any member professing or avowing to practice according to any exclusive system or dogma." It was so voted.

It was moved by Dr. Jewett, and seconded by Dr. Storrs, that the whole matter be indefinitely postponed. It was so ordered.

A recess was taken for the election by the Fellows from each County Association of a member of the nominating committee. The following names were reported to the Secretary and announced to the Convention :

L. S. Wilcox, M.D., Hartford County.
S. G. Hubbard, M.D., New Haven County.
E. C. Kinney, M.D., New London County.
C. H. Bill, M.D., Fairfield County.
C. J. Fox, M.D., Windham County.
William Deming, M.D., Litchfield County,
G. C. H. Gilbert, M.D., Middlesex County.
J. A. Warren, M.D., Tolland County.

The committees then withdrew for the consideration of the various matters of business referred to them.

That on County Resolves had the case of Dr. M. B. Pardee, expelled by the Fairfield County Society, presented to them. Various proposed amendments were referred to the Business Committee, and several names were presented to the Committee on Honorary Membership, for action.

The following letter was read by the Secretary :

AMSTERDAM, Avril, 1879.

Le Comité d'organisation du Congrès international des Sciences médicales qui doit se réunir à Amsterdam du 7—13 Septembre de cette année, a l'honneur de vous envoyer le programme et règlement, qui ont été arrêtés pour ce congrès.

Il vous invite à vous faire représenter au Congrès par un ou par plusieurs délégués, et vous prie de lui communiquer les noms de vos illustres membres, qui honoreront le congrès de leur presence.

POUR LE COMITÉ :

DONDERS, *Président*,
DR. GUYE, *Secrétaire*.

On motion of Dr. White, it was voted that a committee of three be appointed to select one or more delegates, as requested, who would worthily represent us in the International Medical Congress. The chair appointed Drs White, Wainwright, and Storrs, on this committee, who subsequently reported the following delegate, who was accepted by the convention : B. N. Comings, M.D., New Britain.

The Treasurer's report was received and referred to the Auditing Committee, who subsequently reported that they had examined the accounts, compared them with the accompanying vouchers and found them correct. The report was then accepted ; the following is a summary :

May, 1878, balance in Treasury,	$340.78
Received during year,	362.29
	$703.07
Expenditures during the year,	446.00
Balance to new account,	$257.07

There was an increase in the expenditures over those of last year $35.60 and a considerable decrease in receipts, but a portion collected in '77 was from arearages in taxes, and the balance is still larger than in '76 or '77.

The following is the indebtedness of the different counties for the tax laid in 1878:

Fairfield County,	$86.00
New Haven County,	62.00
Litchfield County,	6.00
New London County,	4.00
Hartford County,	None.
Windham County,	"
Middlesex County,	"
Tolland County,	"

There are nearly as large arrearages in New Haven County for the tax laid 1877, while for the tax of 1877–8 in Fairfield County, $35.00 was received from Dr. W. C. Burke, Jr., the Clerk of the County Society in 1877, since which no payment has been made to the treasury.

There are no arrears of taxes due the Society in Hartford, Windham, Middlesex, and Tolland counties, and but one or two delinquent members in Litchfield and New London counties.

These taxes are all due from men well able to pay with but very few exceptions, and were the honest dues, small in each individual instance but large in the aggregate, promptly paid, the Society would not only have a working cash balance each year, and be free from the credit system, thereby securing cheaper work, but gradually accumulate a fund that might be used to make its conventions more pleasant, attractive, and useful, and also to encourage and aid medical investigation and research in this State—interests which should be under the fostering care of this Society. It is earnestly recommended to County Associations to exercise the greatest care in the selection of county clerks, and to retain those that are efficient as long as possible. These clerks are a very

important feature in this society; its prosperity is closely dependent upon the manner in which they perform their duties. Without any formal vote, the sentiment of the convention was strongly expressed in favor of sustaining the clerks in all necessary measures for the collection of present and past dues.

The Secretary presented an informal request from the American Medical Association, that the State Medical Societies request the faculty of each medical college within their jurisdiction to deliver to the graduating classes at least one lecture on the value and importance to the profession of medical organizations, and the duty of every honorable-minded practitioner to support and sustain them by every means in his power. It was voted that the Secretary be instructed to communicate this request from the Connecticut Medical Society to the Dean of the faculty of the Medical Institution of Yale College.

A communication from Gen. Walker, of the Census Bureau at Washington, was presented, requesting each physician to keep record of every case, and stating that blanks would be furnished on application to the department at Washington.

The Secretary reported that there were sundry verbal and other changes relating to the clerical department, some discussed last year, and others rendered necessary by the change in the charter of Yale Medical Institution which was made at the last session of the legislature, the principal one caused by the abolition of the plan of gratuitous students from each county. These had been referred to the Business Committee, who presented a favorable report. On motion of the Secretary, they were adopted, and the Secretary directed to publish the By-laws, Charter, Code of Ethics, etc., in the transactions of 1879, incorporating all changes since the last edition. The committee also reported that the following be referred to the next Convention:

PROPOSED AMENDMENTS TO BY-LAWS.

CHAPTER 5, SECTION 5.—The section shall be repealed, and the following substituted: "No member of this Society shall call in consultation or invite professional intercourse from any other than regular physicians in good standing. But when the professional advice or services of a regular physician or surgeon are required by the practitioners of any incomplete system and those under their charge, such professional services may in all cases be rendered."

After a lengthy debate on the general subject of ethics, illustrated by some "wise saws and *modern instances*," the amendment

was indefinitely postponed, several substitutes sharing its fate. The by-law requires verbal amendment, however, as it limits consultation to licensed practitioners, whose number is very restricted at present.

The following amendment to Chapter IV. Section 9, was, on recommendation of the committee, referred to the next Convention. In the 5th line, after Connecticut Medical Society, insert as follows:

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

This was stated to be necessary in case of contested dues.

The Secretary moved that a committee of three be appointed, with reference to so much of the President's address as relates to the Metric System, to report to the next Convention as to the desirability of its adoption in Connecticut. The motion was passed, and the Chair appointed

Dr. E. B. Lyon, New Britain;
Dr. E. C. Kinney, Norwich;
Dr. C. J. Fox, Willimantic.

The following resolutions were introduced by Dr. Nickerson of Meriden, with reference to that portion of the President's address that related to the treatment of Insanity:

Resolved, That it is the sense of this Convention that the government of this State should appoint three persons, two of whom, at least, shall be physicians of experience and ability, to act as Commissioners in Lunacy, who shall have the supervision of all the insane in this State, whether in hospital, private institutions, alms houses, their homes, or otherwise. It shall be the duty of this Commission to investigate the whole subject of insanity in all its bearings, relations, and causes,—to examine into and report annually to the governor and legislature of this State the condition and management of all the insane in this State, together with such recommendations as they shall think advisable as to the future management of the insane, instructing and enlightening the public as to the causes of insanity and proper means for its prevention; and especially to inquire if the interests of science and the welfare of insane patients would not be promoted by hospitals for the insane being organized on the same principles as other hospitals.

Resolved, That it is the sense of this Convention, that no commitment of any person should be made to an insane asylum without the certificate of two reputable physicians,—the evidences of insanity being stated in said certificates, and, as far as possible, the causes of the disease and

pathological condition of the patient being given, with the length of time he has been insane.

Resolved, That a committee be appointed by this Convention to memorialize the coming legislature for the purpose of procuring an act embodying the substance of these resolutions.

Dr. Chamberlain moved that the last resolution be stricken out, and the following substituted:

Resolved, That a committee of five be appointed on behalf of the Society to investigate the subjects embraced in these resolutions, and report at the next Convention at New Haven what action, if any, be advisable.

Dr. Jewett moved to amend by ordering the committee to report to this Convention on Thursday This was opposed by Drs. White and Chamberlain, and the subject was discussed by Drs. Nickerson, Jewett, White, and Chamberlain. Dr. Jewett withdrew his amendment, and the motion of Dr Chamberlain was then carried.

The President appointed as members of this committee,

Dr. M. C. White, New Haven.
Dr. N. Nickerson, Meriden.
Dr. G. W. Russell, Hartford.
Dr. C. W. Chamberlain, Hartford.
Dr. C. A. Lindsley, New Haven.

The committee on revision of the charter of the Medical Institution of Yale College reported as follows:

To the President and Fellows of the Connecticut Medical Society:

GENTLEMEN:—In accordance with a vote at the last Convention your committee met with a committee from the corporation of Yale College, and one also from the Faculty of the Medical Institution at Yale College, to consider such changes as might be desirable in the charter of the Medical Institution of Yale College, with power to obtain from the legislature such changes as should be mutually agreed upon. The joint committee met January 11, 1879, at New Haven. President Porter and the Hon. H. B. Harrison represented the corporation of Yale College, Prof. Benjamin Silliman the Medical Faculty, and Drs. H. P. Stearns and C. W. Chamberlain the committee on the part of the Connecticut Medical Society. The changes will be found in the charter as revised (see Appendix), and relate to the course of instruction and condition of graduation, which are placed entirely in the hands of the corporation and Faculty. The power of conferring degrees is unchanged, and the importance of the committee on examination is enhanced. It is earnestly recommended

that representative men be selected by the Society. The instrument gives the parties at interest power to sever the connection between the Connecticut Medical Society and the Medical Institution of Yale College by mutual consent, without further legislative action; and abolishes the privilege of gratuitous students from the county associations. The changes are on the whole in the interests of order and progress, and avoid much of the ambiguity of the former charter. In the event of any change, the interests of the society are provided for by the resumption of its former rights and prerogatives. Dr. C. W. Chamberlain was appointed by the joint committee to introduce the bill to the legislature and represent the committee before such legislative committee as it might be referred.

C. W. CHAMBERLAIN,
H. P. STEARNS,
LUTHER WOOD,
Committee on behalf of Connecticut Medical Society.

Dr. Benjamin E. Cotting, of Roxbury, Mass., an honorary member of this Society, and Dr. W. A. Hammond, were present and informally presented to the Fellows by Dr. Carleton. On motion of Dr. Jewett, the following resolution was passed:

Voted, that Dr. W. A. Hammond, a delegate from the Neurological Society of New York, be requested to read a paper prepared for this Convention, immediately after the reading of the essay by Dr. Shew.

The report of the Committee on Honorary Degrees and Honorary Members was given as follows, by the chairman, Dr. White:

The Committee would report that there are no applicants for the Honorary Degree. The Committee would propose for Honorary Membership, A. N. Bell, M.D., editor of the *Sanitarian*, and E. Seguin, M.D., Pathologist to the State Hospital for the Insane, at Middletown.

M. C. WHITE,
WM. DEMING,
N. MAYER,
Committee.

The report of the committee was accepted; by rule the names proposed must lie over until another year for action.

Dr. M. Storrs presented the report of the Committee on Examination (see Appendix), which was accepted and referred to the Committee on Publication.

Dr. White remarked upon the report of the Committee of Examination, and illustrated in a forcible manner the propriety and importance of the changes in the charter of the Medical College

which have been recently obtained by the joint petition of a committee appointed by this Society and a similar committee from the corporation of Yale College. All the students who received the degree of Doctor of Medicine at the last Summer examination which the Committee of Examination so highly extol, had pursued their studies at the College through the entire year, taking the course of regular recitations and practical work in the laboratory.

All but one had passed their entire period of study at the College, and two-thirds had received the advantages of a thorough Collegiate course of study before commencing the study of medicine, while the gentlemen who passed indifferent or poor examinations at the Winter examinations had pursued their studies elsewhere, and only attended the Lecture course at the College, having had no thorough preliminary education, and having never attended the Summer session at the College. The gentlemen who passed good examinations in the Winter were either graduates in arts, or had passed their entire course of three years' study at the College.

The report of the committee, as thus explained, proves clearly the superlative importance of thorough preliminary education (a collegiate course if possible), before commencing a medical education, and it shows also that it is greatly to the advantage of the student to spend the entire period of medical study at the College, instead of the antiquated plan of nominal study in the office of a country physician, merely attending the Winter Lectures at the College.

Under the provisions of the new charter it will be possible, and it is intended, to require of all students a thorough preliminary education and a systematic course of study and recitations.

The reason this plan has not been enforced before, is because the old charter gave no authority to do it. What has been heretofore secured for a part of our students we hope hereafter to secure for all.

It was voted that the annual tax for 1879 be two dollars, payable June 1st, and that six hundred copies of the proceedings be published this year.

On motion of Dr. Chamberlain, the following resolution, concerning that portion of the President's address relating to the office of coroners, was passed :

Resolved, That a committee of three be appointed to investigate the adaptability to this State of the system of medical examiners which has been in successful operation in Massachusetts for two years, and to report

to the next Convention. The committee shall, if they deem it expedient, have power to bring the subject before the Legislature, and to attend, as delegates from this Society, the session of the Massachusetts Medical Society, where the workings of the system are to be illustrated.

The chair appointed on this Committee,

W. A. M. Wainwright, M.D.
N. E. Wordin, M.D.
C. W. Chamberlain, M.D.

The Convention then took a recess until 7.30 P.M.

EVENING SESSION.

The Convention reassembled at 7.30 P. M., when the report of the Nominating Committee was received, and officers elected for the ensuing year, as follows:

President—A. R. Goodrich, M.D., Vernon.
Vice-President—G. L. Platt, M.D., Waterbury.
Treasurer—F. D. Edgerton, M.D., Middletown.
Secretary—C. W. Chamberlain, M.D., Hartford.

Committee on Matters of Professional Interest.

W. A. M. Wainwright, M.D., L. S. Wilcox, M.D., W. L. Bradley, M.D.

Committee on Examination.

J. G. Stanton, M.D., New London; Jas. E. Barbour, M.D., Norwalk.

Committee to Nominate Professors in Medical Institution at Yale College.

Isaac G. Porter, M.D., New London; H. M. Knight, M.D., Lakeville.

Committee to Nominate Physician to Retreat for the Insane.

R. S. Goodwin, M.D., Thomaston; B. N. Comings, M.D., New Britain.

Committee on Publication.

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

Committee of Arrangements.

H. A. Carrington, M.D., Anniversary Chairman; A. E. Winchell, M.D., S. H. Bronson, M. D.

Dissertators.

W. H. Carnalt, M. D., New Haven; I. W. Lyon, M.D., Hartford.

Delegates to American Medical Association.

A. W. Barrows, M.D., R. S. Goodwin, M.D., W. G. Brownson, M.D., D. A. Cleaveland, M.D., Lowell Holbrook, M.D., E. P. Swasey, M.D., E. L. Griggs, M.D., C. J. Fox, M.D., C. M. Carleton, M.D., T. G. Wright, M.D.

Delegates to Maine Medical Society.

T. M. Hills, M.D., E. B. Lyon, M.D.

Delegates to New Hampshire Medical Society.

J. C. Jackson, M.D., G. H. Preston, M.D.

Delegates to Vermont Medical Society.

J. A. Warren, M.D., C. H. Bill, M.D.

Delegates to Massachusetts Medical Society.

Wm. Deming, M.D., A. B. Worthington, M.D.

Delegates to Rhode Island Medical Society.

L. S. Paddock, M.D., J. H. Granniss, M.D.

Delegates to New York Medical Society.

S. W. Turner, M.D., William Wood, M.D.

Delegates to New Jersey Medical Society.

C. A. Lindsley, M.D., George L. Porter, M.D.

Delegates to Pennsylvania Medical Society.

M. Storrs, M.D., J. B. Kent, M.D., W. L. Bradley, M.D.

The Secretary announced that there was a vacancy to be filled in the Committee to Nominate Professors to the Medical Institution of Yale College, arising from the death of Dr. S. Lynes of Norwalk. There being some doubt expressed as to the course to

be pursued, the Secretary read the by-law providing for such case, as follows:

SEC. 7. Any officer of such Society may, for sufficient reasons, resign his office, or may be removed therefrom by order of the President and Fellows, for neglect, inattention, or mal-conduct; in either of which cases, or on the death of an officer, the President and Fellows shall supply the office vacated as soon as may be convenient.

The vacancy was filled by the re-election of Wm. Deming, M.D., whose term of office had expired.

The report of the Committee on County Resolves was then presented by Dr. Davis, as follows:

The Committee on County Resolves respectfully report, that they have carefully reviewed the proceedings of the Fairfield County Medical Society in the case of Moses B. Pardee, in a meeting of said Society held April 15, 1879, and that they unanimously recommend that the State Medical Society indorse the action of the Fairfield County Society in almost unanimously expelling Dr. Pardee from its membership.

In making this recommendation the committee desire to state that the Fairfield County Society, through their representatives, have abandoned so much of the charges and specifications as relate to the professional consultation of Dr. Pardee with his wife.

G. P. DAVIS,
R. S. GOODWIN,
A. B. WORTHINGTON.

It was moved and seconded that the report be accepted.

Dr. Pardee asked the privilege to be heard in his own defense.

Dr. Jewett raised the point of order that no statements or papers could be presented here which were not at the County Society.

The chair ruled that Dr. Pardee was a member with full right to speak until expelled; an appeal was taken from the decision of the chair. On motion of Dr. Chamberlain the votes were taken by aye and nay, the question being, shall the ruling be sustained.

Ayes.—Goodrich, Griswold, Kinney, Brownson, Goodwin, Wainwright, Woodward, Davis, Mayer, Gilbert, Chamberlain, Fox, Whitcomb, Stevens, Beach, G. C. H. Gilbert, S. W. Turner, Kelsey—18.

Nays.—Jewett, Griggs, Burke, Worden, Worthington—5.

The decision of the chair was sustained, and Dr. Pardee read a long statement of his case, which while repelling the other accusations, admitted consultations with Drs. Von Tagen and Mosman, since the last session of the Society.

Dr. Wile spoke at length in explanation of the action of the County Society, which was nearly unanimous on every charge. There was but one ballot for sentence, which was as follows :

Admonition,	3
Suspension, - - -	0
Expulsion, -	19

It was then voted that the report of the Committee be accepted.

The following report was then presented :

The committee appointed last year to prepare a bill for a public act to "regulate the practice of medicine," would report that it has held two meetings, and given to the subject its most earnest consideration.

The committee was unanimously of the opinion that, while the time had not arrived for attempting the specific duty devolved upon them by the letter of the resolution under which they were appointed (and there was a degree of misapprehension as to the intended scope of it), the state of professional and public opinion was favorable to the enactment of a law which would restrain, if it did not entirely prevent, the incursions of itinerant practitioners into the State. They therefore submit the accompanying bill as a part of their report; and invite the attention of the Society to the feature which recognizes, so far as is possible in such a bill, the fact that an adequate medical education, as proven by the possession of a degree from a regularly chartered medical college, or licensing body, should constitute the only legal claim to the title of physician.

The committee may allude to the evidences which every where appear of healthy advancement, not only in the public opinion, but in that of physicians of the various schools, with regard to the necessity of a thorough medical education as a basis for honorable and successful practice, as an indication that the passage of such a law is a step in the right direction, and that the time for its inauguration is well chosen. The march of general intelligence will never retrograde; and it is believed that progress in this direction will not cease; but it should be remembered that the final emancipation of the professional mind from the thraldom of ignorance or imperfect knowledge—from the fatal bondage of dogmas not sustained by scientific facts—and from blind prejudice that controls opinions by the shibboleth of a sect, is only possible so far as minds are enlightened and enlarged by the liberalizing catholicity of true science. The committee offer the following resolution:

Resolved, That a committee of three be appointed to co-operate with similar bodies in bringing before the General Assembly at its next session the accompanying bill, and securing favorable action thereon.

Respectfully submitted,

S. G. HUBBARD,

Chairman.

PROPOSED ACT RELATING TO ITINERANT PRACTITIONERS OF MEDICINE.

SECTION 1. No itinerant practitioner of medicine in any of its branches or specialties shall practice or lecture thereon, within this State, unless he possesses the qualifications hereinafter required.

SEC. 2. Every itinerant practitioner of medicine, in any of its branches or specialties, who desires to practice or lecture thereon, in any of the cities, boroughs, or towns of this State, shall first procure from the board of Censors, as hereinafter provided, a certificate signed by all, or a majority of the members of said board, that he or she is a graduate in good standing of a regularly chartered medical college, that is recognized as such by one of the medical societies represented on said board; or is a licentiate of such society; and that they are the persons named in any diploma, or other document offered in proof.

SEC. 3. It shall be the duty of the Governor to appoint at this session of the General Assembly, by and with the advice and consent of the Senate, a board of Censors consisting of six persons, two of whom shall be members of the Connecticut Medical Society; two of the Homœopathic Medical Society; and two of the Connecticut Eclectic Medical Association, respectively. One member from each of these classes shall hold office for four years, and one member for two years. And at each regular session of the legislature thereafter, he shall appoint in the same manner one member from each of these classes of persons, to hold office for two years. At the first meeting of the board, which shall be held in Hartford within thirty days after its appointment, the board shall organize by electing a president and other officers; shall decide by lot the terms of service of its members; shall make its own rules and regulations. It shall hold its meetings at the call of the president; and when in session under the authority of this act, said board shall have authority to administer oaths; and may revoke for cause any certificate which it may have granted. It shall keep a record of its proceedings and make a biennial report thereof to the Governor.

SEC. 4. It shall be the duty of said board, on receiving satisfactory proof of the facts required in Section 2 of this act, to issue to such applicant, a proper certificate signed by all, or a majority of said board, that the person therein named is a graduate in good standing of a regularly chartered medical college, that is recognized as such by one of the medical societies represented on said board; or is a licentiate of such society (naming the college and the date of its diploma; or the name of the society issuing the license), and is qualified, according to the standard of the school of practice accrediting him, to practice in or lecture upon any of the branches of medicine, or its specialties named therein, during the time that such applicant shall remain in the State. Before the signing of such a certificate, said board shall be entitled to demand, and shall receive from every such applicant, the sum of twenty-five dollars. And the fees thus received by the board shall be in lieu of all other compensation.

SEC. 5. For every month during which such applicant may desire to practice or lecture upon any branch of medicine, in any city, borough, or town, in this State, he shall pay in advance to the clerk of the court of common council, to the senior warden of a borough, or the first selectman of a town, as the case may be, a license tax of one hundred dollars, fifty dollars, or twenty-five dollars respectively.

SEC. 6. Any non-resident of this State, who has or may come into it, for the purpose of practicing medicine in any of its branches or specialties, or of lecturing thereon, who shall invite public attention to himself in newspapers or hand-bills, or in any of the modes usually adopted by

quacks, shall be deemed and taken to be an itinerant practitioner of medicine, within the meaning of this act.

SEC. 7. Any such person practicing medicine, or lecturing thereon, within this State, without having complied with the requirements of this act; or who shall present to said board of Censors any false document or statement, shall be punished by a fine of not less than fifty dollars, nor more than five hundred dollars for the first offence; and for every subsequent offence, by a fine of not less than three hundred dollars, nor more than one thousand dollars; or by imprisonment in the county jail for not less than sixty days, nor more than twelve months; or by both such fine and imprisonment; and such fines may be recovered in an action of debt, for the use of the city, borough, or town, in which the offence has been committed; and shall be sued for by the prosecuting attorney, any of the grand jurors, or the first selectman of such city, borough, or town, upon the complaint of any reputable citizen.

SEC. 8. Any city, borough, or town may enact additional ordinances or by-laws, the more effectually to secure the objects of this act, provided they do not conflict with the laws of this State.

After considerable discussion of the features of the bill and presentation of arguments in favor of and against its provisions, it was voted, on motion of Dr. Jewett, to indefinitely postpone the whole subject.

The Convention then adjourned to meet the 4th Wednesday in May, 1880, at New Haven.

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

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held at Central Hall, Hartford, Thursday, May 29th. The meeting was called to order at 9.30 A. M., by the President, Dr. C. M. Carleton, and the Secretary's report presented, as follows:

The past year has, all things considered, been one of prosperity to the Society, as indicated by the interest taken in its work and in the various County Societies, each of which manifest renewed activity.

The Society has suffered a loss in the death of one of its honorary members, a loss felt and shared by the whole medical world, for in Jacob Bigelow a thinker has passed from among them, one who had contributed to the common stock of knowledge, and left the world the better that he had lived.

There have been added to the Society, through the various

County Associations, 43—a very large accession, and not entirely composed of new men, so that the Society each year more and more completely includes all the enlightened practitioners in affiliation with its principles, while assimilating the new material. Fourteen have died—nearly as large a mortality as in 1877, and of the same average age, so that, taking the last two years as a standard, it would seem that 62, and not 58, was the average duration of a physician's life in Connecticut. Taking into consideration the removals, the Society now numbers 420, or a net gain of twenty-five. The following are the names of the new members reported by the various County Societies .

Ellen F. Hammond, M.D., Womans' Medical College of New York Infirmary, 1872, Hartford.

S. B. St. John, M.D., College of Physicians and Surgeons, 1870.

F. S. Crossfield, M.D., Bellevue, 1878. Hartford.

A. J. Weed, M.D., College of Physicians and Surgeons, 1878, Hartford.

Everett J. McKnight, M.D., College of Physicians and Surgeons, 1879, East Hartford.

S. B. Newton, M.D., Berkshire, 1854, East Hartford.

F. J. Whiton. M.D., Dartmouth, 1871, Manchester.

Charles J. Surredge, M.D., Yale. 1879, Hartford.

Howard C. Allen, M.D., New York University, 1879, Broad Brook.

J. N. Bull, M.D., College of Physicians and Surgeons, New York, 1878, Plainville.

Wm. Howard, M.D., Yale, 1875, Avon.

Max Mailhouse, M.D., Yale, 1878, New Haven.

Edward Dwight, M.D., Yale, 1876, New Haven.

M. C. O'Connor, M.D., College of Physicians and Surgeons, New York, 1873, New Haven.

Wellington Campbell, M.D., College of Physicians and Surgeons, New York, 1877, North Branford.

J. B. Jewett, M.D., Yale, 1879, Birmingham.

J. J. M. Melville, M.D., College of Physicians and Surgeons, New York, 1876, Waterbury.

Anna J. Ferris, M.D., Pennsylvania Womans' Medical College, 1874, Meriden.

Walter Zink, M.D., Wurtzburg, Branford.

R. J. Gibson, M.D., Yale, 1879, New Haven.

E. D. Griffin, M.D., College of Physicians and Surgeons, New York, 1865, Old Lyme.

W. H. Mason, M.D., Buffalo, 1865, Norwich.

Benjamin Roath, M.D., Vermont, 1834, Norwich.

F. V Buesch, M.D., College of Physicians and Surgeons, New York, 1867, Norwalk.

Wm. H. Bennett, M.D., College of Physicians and Surgeons, New York, 1879, Bridgeport.

F. B. Downes, M.D., College of Physicians and Surgeons, New York, 1878, Bridgeport.

F. M. Wilson, M.D., Harvard, 1875, Bridgeport.

A. S. Alling, M.D., Albany, 1872, Stratford.

F. F. Martin, M.D., New York University, 1877, Bridgeport.

A. T. Classon, M.D., New York University, 1875, Danbury.

H. P. Geib, M.D., Bellevue, 1869, Stamford.

E. T. Morse, M.D., Burlington, Vt., 1877, South Killingly.

Casper Barstow, M.D., Burlington, Vt., 1878, South Windham.

W. H. Judson, M.D., Jefferson, Pa., 1878, Wauregan.

Geo. R. Roberts, M.D., College of Physicians and Surgeons, New York, 1878, Collinsville.

Jerry Burwell, M D., Berkshire, 1839, New Hartford.

C. L. Blake, M.D., Yale, 1875, Northfield.

J. R. Sanford, M.D., Yale, 1875, West Cornwall.

F. P. Esterley, M.D., Ann Arbor, 1872, Watertown.

Edward P. H. Griswold, M.D., New York University, 1878, Middletown.

Peter V. Burnett, M.D., New York University, 1876, Middletown.

R. H. Goodwin, M.D., University of Vt., 1876, South Coventry.

F. L. Smith, M.D., University of New York, 1875, Stafford Springs.

The President elect, Dr. A. R. Goodrich, then took the Chair, and the annual address was presented by the President, Dr. C. M. Carlton, on Honesty in Medicine.

The thanks of the Convention were voted Dr. Carleton, and the paper referred to the Committee on Publication.

The dissertation was then presented by Dr. W. R. Bartlett, on The Principles of Hygiene and Conservatism in their mutual relations to Surgery.

The thanks of the Committee were voted to Dr. Bartlett, and the paper referred to the Committee on Publication.

The following delegates from other State societies were presented

to the Convention, and in brief addresses expressed the greetings and congratulations from their societies:

Dr. Charles E. Webster, Maine;
Dr. M. C. Lathrop, New Hampshire;
Dr. A. Hosmer, Massachusetts.

The following gentlemen were also presented to the Society, and gave brief addresses:

Dr. B. E. Cotting, Honorary Member, Massachusetts;
Dr. Frank P. Foster, New York;
Prof. W. A. Hammond, M.D., New York.

Dr. Wainwright presented the report of the Committee on Matters of Professional Interest, which was supplemented by Dr. Chamberlain's report on Vital Statistics.

The following essays were then read:

Yellow Fever.—Dr. N. Mayer, Hartford.

Alcohol as a Therapeutic Agent.—Dr. R. S. Goodwin, Thomaston.

The Insane Colony at Gheel.—Dr. A. M. Shew, Middletown.

The thanks of the Convention were voted these gentlemen, and their papers referred to the Committee on Publication.

Prof. W. A. Hammond then read a paper on the Construction and Management of Insane Asylums.

On motion of Dr. Jewett, the thanks of the Convention were voted Dr. Hammond, and the paper referred to the Committee on Publication.*

Dr. Carleton related a case of ununited fracture, where union was effected by wiring the ends, with presentation of the specimen.

Dr. Foster, of New York, presented a paper by invitation of the Society, on Success in Vaccination.

The thanks of the Convention were voted Dr. Foster, and the paper referred to the Committee on Publication.

Dr. R. W. Mathewson reported a case of removal of uterine fibroid by laparotomy. Referred to Committee on Publication.

The following papers were read by title, and referred to the Committee on Publication:

Officinal Alcohol as a Stimulant.—Dr. D. C. Leavenworth, New Haven.

*This paper may be found in the Journal of the Neurological Society.

Perityphlitis.—Dr. E. C. Kinney, Norwich.

Mortality of the Insane.—Dr. Olmstead, Middletown.

Arsenic Eating.—Dr. P. A. Jewett, New Haven.

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

H. P. Stearns, Hartford;
J. B. Kent, Putnam;
J. P. C. Foster, New Haven;
Wm. Woodruff, Thomaston;
D. M. Cleaveland, Middletown;
N. E. Worden, Bridgeport;
C. J. Fox, Willimantic.

The Convention then adjourned for their annual dinner, at Merrill's.

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

PRESIDENT'S ADDRESS.

HONESTY IN MEDICINE.

CHAS. M. CARLETON, M.D., NORWICH.

Gentlemen and Fellows of the Connecticut Medical Society:

"Faithful are the wounds of a friend."

"For truth we must earnestly seek, even when its developments do not flatter our professional pride, nor attest the infallibility of our art."—JACOB BIGELOW.

Contrary to the usual practice of self-glorification, and that pleasant exchange of mutual admiration which has been the ancient and therefore accepted as an honorable custom of all professional societies to follow at their annual meetings and reunions, I intend to confine myself more to those matters in which the profession is deficient, in which criticism is needful and censure is merited. In the relations of the profession to the public there is much to be improved, much that furnishes no cause for pride and no grounds for gratulation.

The medical profession, nearer than any other in such relationship, standing at the bedside of pain and the pallet of death—entrusted with the knowledge not only of the weaknesses of the flesh, but also of the errors of which frail humanity is always prone, should, in the high character of its members, in the nobility of their aims, in the fullness of their requirements, in the honor of their endeavor, stand fearless—above reproach.

The highways to its honors should be guarded. No unworthy applicant should gain admission to its membership; no incompetent practitioner should be franked with its passports. There should be no royal road to its degrees, no favoritism in its preferments, no inequality in its exactions, and no neglect of its duties.

The highest standard of acquirement and the most rigid tests of ability should be applied to the novitiate who presents himself for its honored degrees.

The question for the schools should be, not how many can be graduated, but rather how many are fitly educated.

The standard of education should be highly placed in the beginning, and then none should be allowed to fall short of it. It is little to our credit that this high ideal is seldom realized.

Honesty in the Schools.

To correct the abuses which we all know to exist—to put the profession on the high plane which every conscientious practitioner would be glad to see it occupy—there must be, to begin with, honesty in the schools. If the stream be corrupt at the fountain-head, what can be expected below? Carelessness on the part of the teachers, and good-natured pliability on the part of the examiners, are but poor encouragement to the great body of high-minded and honorable practitioners who are imbued with the noble aim of elevating the profession, and who recognize the greatest fact in all science, that investigation is constant and science progressive.

Laxity in teaching, and a low standard of acquirement at graduation, are diluting the profession with ignorance and inability to an extent that cannot but be detrimental to the respect in which the profession should be held by the public at large. It is not, to our shame be it said, uncommon to hear educated members of the laity express their fear and distrust of physicians. Nor is there no grounds for the remark that is often made, that none of the learned professions entertain in their ranks more of ignorance and incompetency than that of medicine.

Ignorance masquerading behind the unearned and unmerited diplomas of the schools, or practicing with the license of reputable medical societies, is at once the most humiliating and most dangerous form of quackery that the competent practitioner has ever to encounter.

Honesty with each other.

If, for the advancement of the interests of the profession, it be necessary to have honesty in the schools, it is none the less necessary that the profession observe honesty with itself and the public. Its shortcomings in this regard have been flagrant. Bitter jealousies, unreasoning animosities, and insincere criticisms

have disturbed the social and fraternal feelings which the code enjoins, and which are requisite to that unity of action, without which progress will be slow, and advancement difficult. An important influence in the reformation of this abuse, and an incentive to effort in medical improvement, has been exerted by the local societies in the larger cities and some districts of the State. In the sparsely populated sections of the State these aids are necessarily lacking, but much might be done by more frequent meetings of the County Societies.

Consultations.

As a result of these jealousies and animosities, physicians frequently object to consultations even where the patient or their friends have requested them. Consultations are often of great benefit to the practitioner as well as to the patient. Upon this subject there is much to be said. There should exist but one motive, to discover the *truth* in the case. The physicians should be honest not only to each other, but also to the patient. In case of non-agreement the patient has a right to know it, and the privilege of calling further council. It does not devolve upon the consulting physician to cover the errors or omissions of another by self-stultification, nor should he proclaim them upon the housetop. The provision of the Code, that after examinations consultations should be private, is a good one, because discussion and comparison can be better carried on in private. The general result of the conference should be imparted to the patient or his friends, by the attending physician, *in the presence* of the consulting physician. The only further duty of the consulting physician is to say a cheering word (if he can) to the patient, and take his leave.

The Code not always conducive to Honesty.

What is required of a consulting physician is his honest, unbiased opinion. Anything that tends to mislead his mind or warp his judgment should be avoided. It is for this reason that I take issue with that provision of the Code which requires the attending physician to give his opinion first. It is exceedingly difficult afterwards to avoid the influence of such opinions, more especially if the man who has been in charge of the case from the beginning, be one in whose knowledge and experience the consulting physician has reason to repose confidence. It would be

better, in my opinion, if this provision were changed, so as to require the consulting physician to first give his opinion, and compare notes with the attending physician afterwards.

I regret, moreover, to be compelled, in the interests of honesty, to take issue with another provision of the Code. In the case of diversity of opinion, no mutual concessions should be made, discussions should be free, friendly, and candid, of course, but an honest opinion, amounting to conviction, should be rigidly, conscientiously adhered to. A verdict formed by mixture and compromise of the opinions of both physicians cannot voice the honest conclusions of either, and is almost certain to bring discredit upon one or the other.

Changing Physicians.

Before leaving this branch of my subject, I desire to put myself on record in favor of the fullest liberty of the patient or his friends to change the attending physician for the consulting physician, or for any other, more especially in the event of radical differences in either diagnosis, prognosis, or treatment.

While it would be disreputable and dishonest in the extreme for the consulting physician to in any way attempt to influence the patient or his friends in his favor, it should not be considered unprofessional to take the case if requested. In such an event, the attending physician should retire cheerfully and without malice. The patient has the same right to change his physician that the physician has to change his carpenter, his coachman, or his cook.

Honesty to your Patients.

While it should be the duty of the practitioner to conform to that section of the Code which enjoins an avoidance of exaggeration of the character of the illness of his patient, in order to impress upon him an unwarranted idea of skill, it should be remembered that it is equally reprehensible to belittle the disease, and thus cheat with hopes that can never be realized—with promises that can never be fulfilled. Always remembering that a body diseased frequently infers a mind diseased, and that a knowledge of one's real condition may destroy all hope the practitioner has of a favorable result, it should not be forgotten that the friends have a right to the honest opinion they pay for; and the true condition of the patient should never be withheld when the practitioner is requested to give it.

Honesty in Dishonesty.

There are, however, circumstances familiar to every physician when nothing should be left undone or unsaid, if the honor or the domestic peace of the patient require that the physician should carefully and jealously guard his secrets. Silence unfortunately will not always do it, meddling busybodies frequently find a way to leave the practitioner where even Hamlet's injunctions of secrecy to Horatio will hardly cover the ground, and then, answerable only to his own conscience, of the rectitude of his intentions and the integrity of his professional honor, he should not hesitate to say whatever may be required to hush suspicion and silence inquiry. The recording angel, which is said to have dropped a tear and blotted from the page the oath of "My Uncle Toby" can be safely left to do the same for a physician's lie, if told under such circumstances and for such an end.

No Honesty in Vicarious Labor.

Having heretofore taken issue with the Code, it is easy to do so again. I desire to take issue with the requirement that professional courtesy compels one practitioner to visit the patients of another without fee or reward. In my own practice, while I have always been willing to gratuitously attend the patients of my professional brethren, I have never required their services in return. The reason for this lies in the fact that I have been frequently absent, and did not deserve to receive the fruits of the conscientious labor of my associates when I could do so little for them in return. Some practitioners are not absent a day in a year, others are absent frequently, and often for recreation merely. I can see no justice in compelling others to do their work in their absence for nothing. Those who sacrifice their own pleasure and health for their profession should at least receive pecuniary benefit for their labor.

Honesty on the Witness Stand.

The most difficult test of a physician's honesty is, perhaps, the witness stand. Nowhere else is he under more severe temptation or subjected to more severe criticism. The subject of medical jurisprudence is rarely found in the curriculum of the schools, and as a natural consequence the physician is self-taught, or, what is much more commonly the case, is untaught. It is a position in which exact and comprehensive knowledge is requisite, and

exact and comprehensive statement is required. The temptation to meet an unexpected point with theory and guessing is great, the courage to confess ignorance is rare. The result is not unfrequently confusion to the individual and discredit to the profession. I well know that medicine is yet far from an exact science, but there is nevertheless a vast fund of knowledge, the result of decades of investigation and years of proof, that cannot be gainsaid. He who attempts to controvert it, assails a rock and is crushed himself in the effort. Much of what must be sincerely lamented because of its disastrous results in weakening public confidence and lessening public respect, is due to the faulty methods of the law itself—but the physician is seldom without blame.

If the medical experts were summoned by the court and examined by the court, much might be remedied. As the eminent English surgeon John Eric Erichsen says: "The whole question as to the appointment, and the method of taking the evidence of surgeons who are called as 'experts' to give a scientific opinion, appears to require reconsideration and modification in many important particulars. Their selection by the litigants and not by the court necessarily lays them open to the suspicion of partisanship, and undoubtedly does tend, in the minds of most men, to give a bias in favor of the side by which they are retained. Hence it is natural that their evidence should be received (often, I believe, most unjustly) with a good deal of suspicion by the court and occasionally with marked disfavor by the bench."

Witnesses have rights as well as responsibilities in a court of law, and he only will gain credit for himself, and do no dishonor to his profession, who testifies to what he knows, and refuses to testify to what he does not know; and can successfully resist, not only the blandishments but the badgerings of *impudent* lawyers, who desire him to do otherwise.

In Conclusion.

I have before said that ignorance in the profession was one of the most dangerous forms of quackery. I can perhaps go further, and say that, allied with dishonesty, it is more than anything else responsible for the existence of Homœopathy and the exciting cause for the spread of that popular delusion. The public drugged to unreason, mangled by unskillful surgery, tortured by malpractice, has lent a ready ear to those who pretend to liberate it from these grievous ills. The dogma of *similia similibus curantur* is lit-

tle understood and little cared for by those who swallow the attenuations, and are cured by nature and by faith, if they be cured at all. Imagination is said by competent authority to be physic to a fool, and the pellets of Hahnemann are simply aids to imagination. I can only add in the words of Jacob Bigelow, who though dead yet teaches the lasting lesson of honesty in medicine "If you would discourage quackery, take care that you become not quacks yourselves. Charlatanism consists not so much in ignorance as in dishonesty and deception. The true physician should be contented to build up his own character, within his own sphere, as a man of knowledge, fidelity, and honor. The respect of the community and the attachment of friends will always attend on him who loves truth for its own sake, pursues knowledge that he may be able to benefit others, and deals justly with his fellow men, consenting that they in turn should deal justly with him."

DISSERTATION.

THE PRINCIPLES OF HYGIENE AND CONSERVATISM IN THEIR MUTUAL RELATIONS TO SURGERY.

W. R. Bartlett, M.D., New Haven, Conn.

I use these terms, Hygiene and Conservatism, together, because the one involves the other, and in surgery, especially, they cannot be separated. To conserve is to restrain and preserve, and applied to a surgical disease, conservatism mitigates effects and modifies processes; it even reaches the state of health, and inaugurates such a course of action as to overcome that which, if unchecked, would go on to disease. Now, in accomplishing these results, hygiene is a powerful and ever present agent; without it, conservatism is impossible; with it, it is made complete. Says Flint, "The conservative surgeon aims to preserve the integrity of the body. He spares diseased and wounded members whenever there are good grounds for believing that by skillful management they may be saved. He resorts to mutilations only when they are clearly necessary. He weighs carefully the dangers of operations, so as not to incur too much risk of shortening life by resorting to the scalpel." We hear a great deal said concerning the prevention of diphtheria, of typhoid fever, of scarlatina and other specific diseases, and but little of that of surgical diseases, as aneurism, hip-joint disease, cancer, calculus, necrosis, degeneration of veins and arteries, and many others; partly, perhaps, because they are in a measure sequences of general depraved processes, and not as distinct by themselves as the preceding, and partly because, being surgical, the element of prevention is overshadowed by the purely mechanical and operative. None the less, however, do they deserve a consideration directed to their specific prevention, and to the obliteration of the morbid tendencies which bring them about. A considera-

tion of the foregoing points, then, shall in a great measure be the aim and scope of my paper, not only that their importance may be made fresh in your minds and attention be attracted to the subject as a means of professional advancement, but that it may also serve as a stimulus through you to that higher education of the people which sanitary science is so steadily leading to, for its range extends beyond the domain of surgical diseases and passes into the category of surgical injuries—it reaches out into the business pursuits of life, into the homes of mankind, and looks to the better adaptation of factories to the safety and comfort of the workmen, to the better and safer management of railways—indeed, it enters into all the pursuits of life so fruitful of injury and disaster to men. These are subjects which more or less continually exercise the attention of men in a general and social way, but their specific consideration will only tend to emphasize their importance, and set the public mind on the track of a direct review of the relations between occupation and injury, in the light of cause and effect. And in treating of this subject, it is also my purpose to point out some of the ways in which hygiene touches operative surgery in a practical manner, by relating some cases from the actual experience of representative surgeons, in which it has been recognized, and has exerted a beneficial influence. These propositions will not be considered separately, because they insensibly merge into one another and mutually coalesce, but will be treated as they naturally come up.

Hygienic surgery is that antithesis of the first conception of surgery whose exponent is the knife, whether called into action in obviating a tendency toward or in overcoming a result caused by it; thus it is continually leading away from it, and approaches more and more to the preservative and reparative powers of nature. It leads from that low conception of surgery which thought its only function was to cure surgical disease by manual operation, or to treat an external manifestation by such manual aid, or by drugs and medicaments externally or internally applied, and goes back to the tendencies of such manifestations and overcomes them there in their origin. Ambrose Paré and the older surgeons but blindly groped after this truth when they applied the cautery to wounds and dressed them with various complicated appliances, not knowing that whatever benefit was derived from them, if perchance any, accrued not from "inherent" property in local effect, but from the overcoming of certain factors which resided either in the air or organism, and which, unchecked, would lead to bad results.

We now have not yet reached a full appreciation of this truth, but have attained to at least a proper conception of it, which is one step toward great results. Mr. Lister's system now is not less cumbersome, and possesses quite as much of paraphernalia as theirs, though devoid of barbarity, but its principle is based upon these facts of which we have been speaking, and whatever of truth there is in it resides there. Could those old surgeons look over the field that we tread to-day, doubtless they would say, "This is not my place; I never walked among such scenes; my business was to cut, to remove limbs, to lay open the aneurismal sac, to cut the bladder for stone, to remove tumors, to apply the hot iron, to bleed, but when you declare that it is the chief end of our calling to prevent these troubles, to seek to dispense with the knife, to find invisible germs in the air, then you have missed our high prerogative, and the noble art of surgery is deprived of its best rights." Hippocrates would not have said thus, and even the founders of surgery might have entertained larger views, but during all that period known as the Middle Ages, when surgery was degraded to its lowest level, on to the advent of that age of heroism which marked the new birth of surgery, that spirit moulded it with a varying degree of dominancy even until this new era of hygiene, the "second new birth" in medicine and surgery. The surgery of the first new birth, impelled largely by the impetus which Vesalius and his disciples gave to the study of anatomy, started out with the idea that there was the great ultimatum of practical surgery, that dexterity and skill in operating were the chief requisites of the practical surgeon; but true as this is in its proper sense, this sentiment, unrestrained, goes on to excess, and needs some counterbalancing force to hold in legitimate bounds the use of the knife. Now, what practical anatomy is to this use of the knife, that is practical hygiene in the restraint of its use, and when both are employed together we have a happy mean which leads to a well adjusted harmony. And when we come to view surgery not as a category simply of operations, each having a distinct name, or of diseases to be cured by means directed to them alone, but rather when we consider these states as exponents of processes which have been going on in the system and in influences surrounding it, though they may not be always preventable or be obviated short of the use of the knife, yet by a realization of these truths do we take surgery out into a larger field of usefulness, and one feels that he has a larger scope for his powers, and

that the possibilities which lie in store for his art are vastly and increasingly enhanced. He feels that if morbid processes can be overcome at their inception, or turned from what would be inevitable bad results if left alone, that such a surgery is one of promise far exceeding that based upon any other conception.

This is exemplified in the care which the surgeon of the present bestows upon the preparation of a patient on whom an operation is about to be performed, and in the attention which he bestows upon the after treatment. Conservatism and hygiene here play an important part, the patient's surroundings are considered, he is prepared physically for the ordeal through which he is to pass. If he is debilitated, he goes through a course of tonic regimen, by diet, by iron, or if his blood is tainted with the scrofulous, tuberculous, or syphilitic diatheses, these are overcome by alteratives; every detail that ministers to his comfort is attended to—his dress, his daily routine of action, his hours of sleep and all those external details which make up a perfect preparation for the shock which the system is to undergo. Then when the operation has been arrived at, half the battle is won—preventive surgery has accomplished what the knife could never have done alone; indeed, it has changed it from an implement of death to one of ministration. It is thus made the agent of completion in a process begun long before, and instead of being the forerunner of erysipelas, gangrene, pyæmia, and kindred troubles, it is the transition to a new process which goes on and up toward health. There is no break in the gradation, preparation, operation, and cure, each independent in one sense, but blended into a harmonious whole. The scientific process becomes vital, and the purely mechanical art loses itself and its technical character by the same spirit infused into its formal, not to say repulsive details. During his recent visit to New York, Mr. Callender, the eminent English surgeon, in a clinical lecture delivered at Bellevue Hospital Medical College, laid special stress upon these points. "He urged in a most forcible manner upon those present the very great importance of attending carefully to the details of surgical dressing, and emphasized the great need of exact attention to the complaints, no matter how insignificant, of patients during convalescence after amputations. He stated that the advancement in surgery was now to be made in the little details of the after treatment in hospitals, as well as private practice. He spoke of the importance of alleviating pain after operations, and declared that the percentage of mortality

after amputations should be very small, and that there was no need of patients suffering, and that when they did it was more likely the fault of the surgeon, and that nothing in the science of surgery was too small to be worthy of attention."

The hygienic condition of the patient, then, both before and after the operation are the great factors of success, for while it is comparatively easy for the skillful surgeon to perform even the most weighty operation, and with a reasonable prospect of success, if he neglects these elements, instead of putting his patients in a fair way of recovery he is but preparing the nidus for the seeds of infection, or laying open the body only to aggravate a hitherto insidious systemic derangement.*

Let us now proceed to consider some of the specific ways in which hygiene and conservatism exercise a modifying influence upon surgical disorders and conditions. One great predisposing cause of surgical disease is disordered nutrition, malnutrition, or "malassimilation," as Erichsen calls it, and as he says, "arising from an habitual disregard of hygienic laws; either from want of food, or the administration of improper food in the poorer classes; or from overfeeding, and over stimulation of the digestive organs among the children of the wealthier orders of society, inducing chronic irritation of the mucus membrane of the stomach, and interference with the digestive powers, and consequently with nutrition." In looking over that excellent monograph on the surgical diseases of children by Guersant, one cannot but be struck with the long list there presented. He finds nearly all the prominent surgical diseases there depicted, and especially is he struck with the frequency of diseases of bone, disorders which play so prominent a part in the surgery of adult-life, and he finds that all are due largely to these two great concomitants of malnutrition, viz., tubercle and scrofula. In Ziemssen's Cyclopedia, Senator, writing upon rickets—one of the most frequent manifestations of the scrofulous diathesis, though not so common in this country—says, "Finally, debility from whatever cause, anemia, chronic discharges, enfeebled nutrition in one or both parents, advanced age at the time of procreation, may all promote the development of chronic diseases in general, and of rickets in particular, in the offspring," and among exciting causes improper feeding takes the foremost place in his estimation. And in the article on scrofula in the same

* New York *Medical Journal*.

volume, that disease is ascribed in a large measure to unfavorable hygienic conditions, especially those in regard to food and air. and in the preventive treatment of the disease, especial stress is laid upon the mode of feeding children, and the need of pure air during the first years of life. And Erichsen says, "The preventive treatment of scrofula and tubercle may be said in general terms to consist in clear and continuous attention to hygienic rules. The diet must be especially attended to—nourishing food, but of the lightest quality, being given. The skin should be attended to, bathing and friction of the surface, stimulants nearly interdicted, in short, the whole hygienic regimen should be faithfully carried out. Under such treatment, he says, "I have no hesitation in saying the development of the affection, even when hereditary, may be stopped, and the child of strumous parents—presenting perhaps, the features indicative of the diathesis—may pass through life without the disease having an opportunity of declaring itself. In order to accomplish this, however, the preventive plan of treatment must be commenced early, and continued uninterruptedly for a considerable time, even for years."

Such is the prospect held out in the case of children, and if these precautions were fully observed, all that grevious list of troubles which blossom out in maturer years would be in a large measure obviated. Take as another illustration, the effects of conservatism and hygiene upon that affection known as morbus coxarius, which will serve as a typical illustration of diseases of bone. Surgery, *per se*, had only one resource in this disease, namely, amputation; preventive surgery has three, each showing a successive degree of enlightenment and a higher degree of knowledge than the one previous. First, in the prevention of the tendency to the disease in a hygienic care and development of the infant and growing child, and secondarily, in the prevention of ultimate results by rest and extension of the joint, or by the use of a properly adjusted splint; and third by a prompt and effective excision of the head of the bone whenever the suppurative stage has been established. Here, then, between health and the ultimatum, are three stages of preservation which may be made use of, as their importance is realized—the first as practicable as the last, if only its importance is appreciated.

And similarly do we see this principle illustrated in those recent great advances in the treatment of spinal disease by the extension apparatus of Sayre, and the plaster of Paris jacket. Here, by the

lifting away from one another of the diseased and distorted vertebræ, the cause of irritation is removed, the natural position is restored, and by the simple and effective plaster jacket the desired position is maintained, and the earlier this treatment is adopted by so much is it more successful, and partakes to a greater degree of the preventive character, and stimulates the surgeon to employ those adjuvants to mechanical means so fruitful of benefit at the very outset of the disease as friction, cold-baths, gentle extension of the spine, attention to posture, especially in school, and hygienic means in general according to the special needs of the case. The history of the various stages of urinary calculi is a good illustration of the points under consideration; here the doctrine of conservatism is beautifully exemplified. First, there are the errors of diet and assimilation which lead to stone, then the first formation in nucleus, then the growing stone, with its effects upon the bladder—first irritation, then inflammation and thickening of its coats, with coincident changes in the prostate, ureters and kidneys, and urethra, going on to all those aggravated symptoms which proceed from such changes. And here beside it we place the treatment which has been adopted from radical to conservative and preventive. First we have the cutting operation, or lithotomy, an operation practiced from the earliest times. This is truly a triumph for operative surgery, but is an extreme measure. Then comes lithotrity, which had its birth in recent times, having been originated about the year 1820. This was a great advance in conservative surgery, for in properly selected cases the mortality is much less than that from lithotomy. And now comes Dr. Bigelow's new operation of crushing the stone at a single sitting—an operation which has met with decided success in his own hands and those of others. Dr. Bigelow having reported sixteen cases treated on this plan, and all successful save one, this being a man aged 66. Dr. Sands of New York, for one, speaks very highly of the method, having removed a hard stone at one sitting in an hour and ten minutes, and considers it a decided improvement on the old method.

Then we come to another important factor in the scale of progress, viz., an early diagnosis of the stone, for if found in its incipiency, it may be easily crushed, and a long train of symptoms thus prevented. Then we arrive at the domain of pure preventive. Can anything be done there? Unfortunately thus far this treatment has availed but little, but the causes of stone unquestionably are largely due to improper living, and when people learn

to live correctly, urinary calculi will measurably disappear. Gross says, that at least one-third of all the cases of stone in the bladder occur under ten years of age, and that it is much more common among the poor than the rich. And Guersant says, the principal cause which he has established in children, and which applies to all countries, is improper alimentation; and the great majority of patients were among the poorer classes improperly fed and clothed, while it has scarcely ever been met among the well clothed, well-warmed, and well nourished children of those in comfortable circumstances.

Again, take that affection of the arteries known as aneurism. Of the causes which Erichsen enumerates as productive of it, nearly all are in a degree preventable, as irregular and sudden and violent muscular action, producing an irregular and greatly increased action of the heart in the case of those not accustomed to labor; cachexy, induced by such causes as syphilis, gout, and rheumatism, obstacles to the free flow of blood through an organ or the capillaries of a part, as improperly adjusted clothing, tight lacing, and obstruction in the abdominal organs. And as direct exciting causes are blows, violent strains, and wounds of an artery, causes which come under the head of violence, and which are directly preventable.

Dr. Richardson states that those who used to be accustomed to ride carriage-horses as post-boys were particularly susceptible to aneurism, and that with a different civilization this cause has ceased. According to Dr. Parkes, eleven times as many aneurisms occur among soldiers as civil persons, and setting aside the influences of syphilis, excessive smoking, and alcohol, he finds one cause continually acting, viz : long continued and often rapid exertion, while the clothing is tightly fitted about the neck, and may I not add as another cause, the abuse of athletic sports as shown in walking matches of inordinate length, and excessive trials of strength. The curative and surgical treatment of aneurism are proverbially unsatisfactory, and the question arises, if more attention was bestowed upon obviating the causes just named, would not the frequency of this disorder be measurably decreased? And what shall I say of the preventive treatment of cancer, of inflammation, of hernia, of degeneration of vessels? I will pass them by with the mention; but there is one disease which must have a moment's consideration and that is syphilis, a disease which plays so prominent a part in the production of surgical disorders, and about which so much has

been said and written, with a view to its prevention either by the suppression of prostitution or by its restraint by a public supervision of it. It is against this latter that I would protest. Vice can never be countenanced by law with safety; immorality must be suppressed, not licensed. No matter how impracticable it may be to do this at present *in toto*, yet the end can never be attained by the opposite method: the only safety is in a vigorous execution of law, and in the inculcation among the masses of a healthy moral sentiment. Preventive surgery finds an apt illustration in the attention now paid to hospital construction. Here again it departs from the narrow bounds of art and enters upon the domain of rational science. Formerly architectural beauty and massiveness of construction were the chief ends sought in hospital construction. Now it has come to be recognized that the chief requisites of a good hospital are adaptation in warming, ventilation, cleanliness, and for the comfort of the patients, else it soon becomes the lurking place of pyemia, gangrene, erysipelas, pneumonia, and "hospitalism." Of these pyemia is the most frequent cause of death after hospital operations, and Erichsen says, there is no more common or certain cause of its production than the overcrowding of patients suffering from suppurating wounds in hospitals. It is evident, then, that the simpler and plainer the construction of a hospital the better, consistent with comfort and the requirements that have been named. Dr Wilson says, "The future hospital should be erected in as airy and open a space as can be obtained, preference being given to the outskirts of towns or to their largest interior unoccupied spaces." And he recommends the pavilion system as being best adapted to meet the sanitary requirements of the case. But preventive surgery finds its greatest exemplification in Lister's antiseptic method of treating wounds, and whether its efficacy be due to the destruction of atmospheric germs or to an almost perfect cleanliness in every detail, both at the time of operation and in the after treatment, its efficacy as a principle has been and is continually being attested to.

In a paper in the *British Medical Journal*, Mr. Keith gives the results of his experience with antiseptic ovariotomy. In a list of forty-three operations performed under the spray, two died; these two were very unfavorable cases; the rest, forty-one in number, all recovered. He is of the opinion that the spray has lessened the mortality. In Germany the mortality fell at once from its use from fifty to twenty per cent. The increased safety will encourage medical men to undertake earlier operations, as convalescence is

rendered easier and more sure; and in conclusion he goes on to say, "This long despised operation is now the safest of all the great surgical operations, at least judging from these results—twelve deaths of the last one hundred and fifty-six, three of the last seventy-five, and no death of the last forty-one operations, and so this great operation, from boldness and a daring conception—so daring as to excite the condemnation of some of the best minds because unjustifiable—has gone on and established itself not alone in usage, but because it has gathered to its aid all the helps which prudence and caution and science can dictate, and at last calls upon preventive surgery even for its crowning support."

Prof. Vollkman, of Halle, relates a series of seventy-five cases of compound fracture treated by conservatism under Lister's method, without the loss of one patient, the fractures in many cases being into joints. Dr. Robert Barnes gives some of the incidental benefits of antiseptic surgery in the *British Medical Journal*, as follows: "The surgeon secures himself as well as his patient from the dangers of blood poisoning, also from the dangers attending post-mortem examinations. It enlarges the field of operations hitherto condemned by making them safe. The success of many operations recognized is greatly increased. These are the two great facts of Lister's method. The special dangers inherent in large hospitals are eliminated, and their advantages are untouched. Ovariotomy is as successful in general hospitals as in smaller institutions or in private practice." While in this country we have the same individual testimony to the benefit of this principle, either in full detail or in a modified way, all corroborative of its great influence in preventing suppuration and promoting and conserving the healthy healing powers of nature.

And now, in closing this cursory survey of a field whose resources are boundless, we are brought to see that in surgery there are three stages of progress and mutual dependence—manual execution, conservation, prevention. How natural the progress, how easy the gradation, how close the connection. We cannot say that there is anything loftier and nobler in preventing a surgical disease than there is in executing a surgical operation when each is considered by itself, but we certainly can say that to be able to prevent a tendency from ripening into a diseased state is a far nobler and more beneficent purpose, and a higher consummation, than the simple domain of operative means, and as the causes of disease are more and more elucidated, thus may surgery step

from one gradation to another, and while the science gains the art will not lose. "Giving does not impoverish and withholding is not gain." To-day and always the operator may take pride in his dexterity and brilliancy of action, but none the less, nay, far more, may he pride himself that he can the oftener lay aside the knife because the needs which hitherto have called it into use have disappeared. So the times have changed. John Bell's greatest triumph would have been to demonstrate to his compeers how best to cut for stone or to amputate a limb, John Hunter's to have shown the nature of a given pathological state, while Lister would be most delighted now to demonstrate to his associates how a diseased process can be thwarted in its incipiency by antiseptic means; and who can say what the future will bring forth?

ANNUAL REPORT

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

Your Committee regret to report that they have not been successful in interesting the members of the Society in the very important portion of its work which is committed to their care. Thinking that the subject of Diphtheria, on account of its importance and prominence as a disease, would most surely excite their interest at the present time, they prepared a list of questions relating thereto—some statistical, others theoretical in their nature—and sent a copy of them to each of the 397 members of the Society. *Eighty-one* answers have been received by the County Reporters. From Hartford County, 16, with a membership of 83. From New Haven County, 10, with a membership of 108. From New London County, 11, with a membership of 34. From Fairfield County, 16, with a membership of 56. From Windham County, 6, with a membership of 38. From Middlesex County, 6, with a membership of 31. From Litchfield County, 12, with a membership of 38. From Tolland County, 5, with a membership of 15. While the thanks of the Committee and the Society are due to those who have sent replies to the questions, and particularly to the few who have sent careful and able papers, and who have not been satisfied with simply sending a "Yes" or "No;" still, it is obvious that no very important practical or scientific deductions can be made from the experience or opinions of the members of the Society, when only one-fifth of its number will take the trouble to give us the one, or express the other. When it is taken into consideration that each one of the replies represents an actual outlay of *fourteen cents*, it seems hardly an adequate return to the Society for the capital involved, or to the Committee for the manual labor of sending out the circulars. It may be that the trouble lies in the Committee, that they do not go about their work in the right way; as is suggested by Dr. Wordin, of Bridgeport, whose very admirable letter they have published with the report from Fairfield County, and to which they beg leave to call particular attention. We quote his remarks, as follows: "Before beginning my reply direct, I

wish to say a few words, which the circular suggests. If they are worth considering, I hope they may reach the Committee, who would be directly concerned with them. Probably no more important subject than diphtheria could claim the attention of the medical men of our State,—a disease so fatal, so little amenable to any kind of treatment, so common, and whose manifold causes lurk, concealed, in the houses of both rich and poor. It is a disease which is increasing among us. It is one which every physician would like to know more about, and would willingly investigate. It is therefore very unfortunate that the Committee should have chosen such a time for issuing their circular of inquiry. Had it been given to us at the beginning of the year, instead of at its close, every case could have been intelligently investigated, with direct reference to questions four, five, nine, and ten. As it is, there is nothing to depend upon but memory and the record-book. The former is not always a safe guide, where so much and in such detail is to be recorded. Besides, what physician with fifty cases of diphtheria would have both time and patience to look over the names in his ledger and notice every case? As to the record-book, what proportion of physicians record every case of diphtheria they attend? What proportion keep any record-book at all? If the Committee want intelligent, accurate reports, it seems to me they ought to change the time for sending out their circular. Mine was received on the 21st instant. I must send my reply on or before April 1st. That leaves me eight days in which to prepare a reply. Some will be abundantly able to do it; for others, I know that the hours will be too few." That the Doctor himself does not belong to the latter class will be made apparent, from a perusal of the whole of his excellent letter. The Committee, however, are not willing to take the entire blame of their failure; nor are they willing to shoulder the results of the general apathy on the part of the members of the Society. To show that we are sustained in this position by some, we quote the following extracts from the County reports:

The Reporter for New London County, Dr. L. S. Paddock, of Norwich, says: "I am sorry that a reply from every physician in the county could not be obtained to the list of questions pertaining to diphtheria. To make a report of value, it should be based upon the clearly and positively expressed opinions of all, confirmed by experience. Many towns have not been heard from, and some have not confined their answers to the subject under consideration. I regret exceedingly that we cannot have a free interchange of

views on this important subject." Dr. Lowell Holbrook, of Thompson, Reporter for Windham County, says: "The circular sent out by the Committee has met with responses from *several* of the profession in this county, though not eliciting replies from the majority. The failure of some to respond is perhaps to be attributed rather to lack of information to communicate than indifference to the call." A gleam of light, however, comes from the hills of Litchfield County, as Dr. L. H. Wood, of Wolcottville, the Reporter for the county, and who received 12 replies, where 38 were looked for, reports: "I have received more answers to the questions sent out by the Committee this year than heretofore, showing, I judge, an increased interest on the part of individual members in these matters."

By the present working of the State Board of Health, a large part of the material from which this report is made is taken out of the hands of the Committee, and is more accurately and acceptably presented in the Report on Vital Statistics, by the Secretary of the Board. And as that is really the most important part of the work of the Committee on Matters of Professional Interest, it becomes a question whether it would not be better to abolish that Committee altogether, and leave to the County Reporters that part of the work not done by the State Board of Health.

The Committee regret to find that there are not more cases reported from County Societies. The medical periodicals show that there *are* interesting and instructive cases occurring in and being reported from Connecticut, and it is a question, whether it would not be better, and more to the credit of the profession (for each one ought to have the credit of the State in mind), if such communications could make their first public appearance in the transactions of the State Society.

The preparation of this report has been by no means a pleasant task for your Committee to perform. We have considered it our duty to lay before the Society the facts as they are, apologizing for our own shortcoming, and trusting that your Committee of the ensuing year may do their work more acceptably; and hoping that they may hit upon some plan which will in a far greater degree meet your approval and gain your co-operation.

Respectfully submitted,

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H. W. BUELL, M.D.,
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Committee on Matters of Professional Interest.

ON VITAL STATISTICS.

When requested by the Chairman of the Committee on Matters of Professional Interest in the State to supplement his report by one upon the lessons to be derived from the yearly census of births, marriages, and deaths, and the causes that influence life and health as there revealed, it seemed to me that it would be more profitable to confine myself to some general conclusions, leaving the tables and figures upon which they are based to be read at your leisure in the Registration Report. As the subject naturally has a wide range, I may perhaps be excusable in prefacing what I have to say upon special topics by a few general considerations upon subjects that are intimately connected with the matter in hand.

The relation of a complete and accurate registration of vital statistics to State medicine places its importance and value in perhaps the strongest light. Unfortunately, even in the medical profession, the true value of vital statistics is so little appreciated that those who should be the pioneers in enforcing upon the people the necessity of completeness and accuracy are themselves the delinquents, and too often obstacles in the way of progress. Even with the spur of pecuniary reward and liability to a penalty, the profession are too often laggards. The value of vital statistics to hygiene, cannot be overestimated. To them it owes its origin, and upon them it depends for each step in progress, nor can legislative enactments be even asked in support of any measure not based upon the most solid array of fact.

"Vital statistics," says Chaillé, "furnish most unerring lessons as to the health, prosperity, and morals of the people; they teach the influence of marriage on illegitimacy and morality, the vital force of the children, the duration of life with its expectation and value for all ages and races, the influence of meteorology, occupation, and locality in generating disease and improving health, and thereby the removal of unfavorable conditions often found where least suspected, and the approach of morbific storms, by ignorance of which negligent cities and even nations have been destroyed. The only foundation of life insurance, vital statistics serve alike to guide the resident and the immigrant, the capitalist and the laborer, the politician and the statesman, the moralist and the scientist. Ignored or disparaged too often, they have been advocated and supported by Napoleon and Thiers, by Bismarck and Cavour, by Gladstone and Disraeli, and their establishment has become a test of the degree of civilization reached by a people and their rulers."

Our first effort must then be made amongst ourselves, in incul-

cating a true idea of the duty of promptness and accuracy in what too often seems but an irksome and unimportant task. The last legislature, through the efforts of the State Board of Health, enacted some improved regulations upon registration, but it is upon the enlightened cooperation of the medical profession that we must mainly depend, for unfortunately the clergy are too often derelict even with the evident relations to morality which promptness in their returns would suggest. This subject is, it is true, closely connected with the evils of quackery and charlatanry in medicine, but I know of no better way in which these evils can be met than by an organized profession. The precept of the Alabama Society is a good one to imitate, "that it would never demand, under any circumstances, legislative action for the exclusive advantage of the medical profession," and that its primary object should be the purification of the regular profession, and secondary, the suppression of quackery. Thus, even admitting the necessary imperfections in regard to the true causes of death, resulting from the reception of certificates from the ignorant, unscrupulous, and illiterate, the broad lines upon which study and investigation are now directed can be nevertheless successfully followed by the general facts attainable, if completeness only be secured. Indeed, by attention and accuracy upon our own part, the evils that result from unqualified practitioners in medicine, midwifery, and surgery, can be made to stand out in such bold relief that the attention of the most careless and unthinking will be arrested. As education advances and becomes diffused among the people, the time will surely arrive when the certificate of an educated practitioner only will be received as a satisfactory statement of the cause of death, and a registration of all prevalent diseases will form the basis for action by local as well as general Boards of Health. And as the scope and power for good of State medicine become known and appreciated more generally, as the application for the common welfare of everything that medical knowledge and legislative and executive authority can contribute, including the public care of the helpless, the sick, and infirm, the inebriate, idiotic, and insane, the tramp, and the criminal, medical education and jurisprudence, preventive medicine and public hygiene, the complicated problems in each of these departments will be solved, for weal or woe, by the aid of the recorded facts included in the comprehensive term vital statistics.

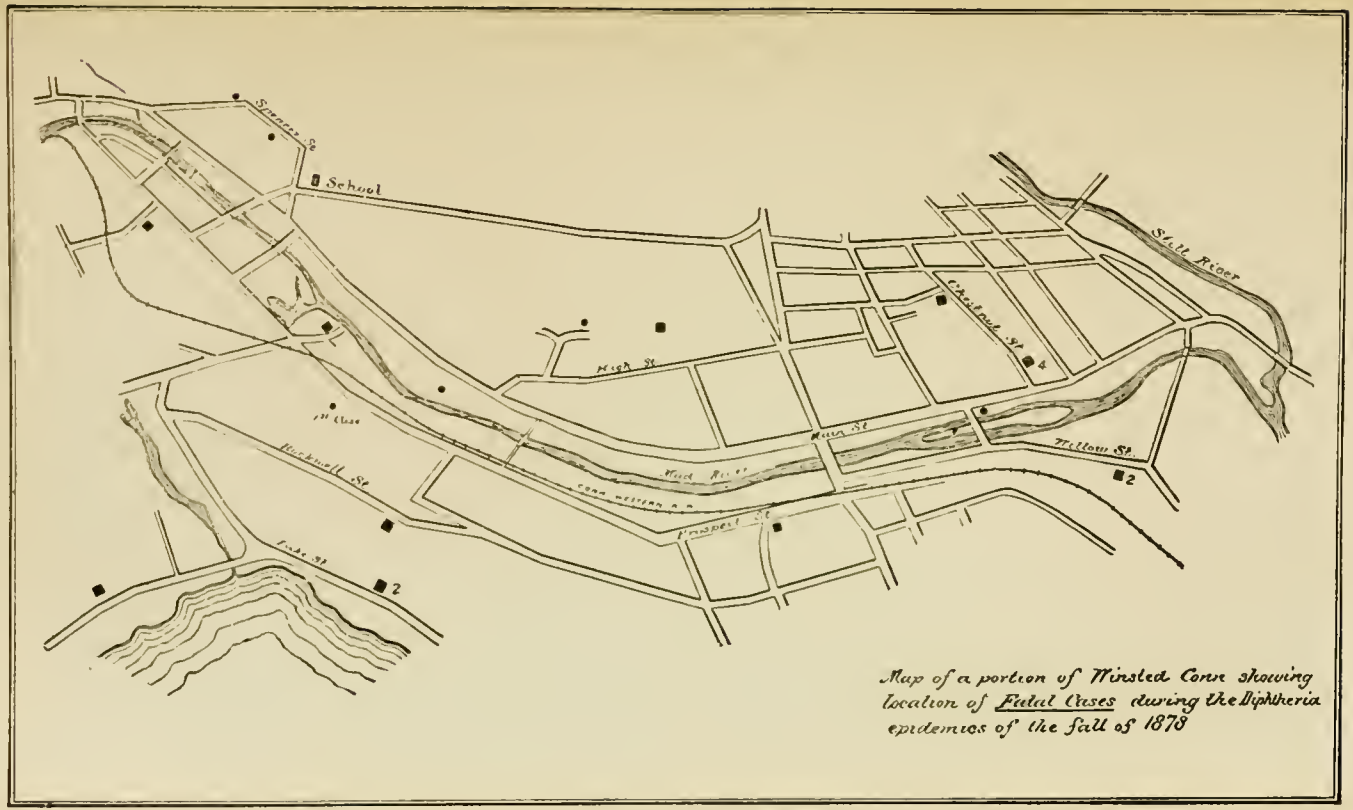
There are many complicating elements that enter into the ques-

tions relating to vital statistics which require attention, if any valid conclusions are to be drawn. The influences of race, heredity, locality, population, unsanitary surroundings, contagion and infection, foods, and water supply, and occupations, alike require consideration. In fixing upon death rates, we are met at the outset, in this State, with a difficulty arising from the infrequency with which the census is taken, once in ten years, with such a restless and changeable population, this gives simply a basis for calculation. The enumeration of voters and school-children each year, however, furnishes a uniform method of computing population from the average ratio these bear to the whole, and for purposes of comparison is accurate enough. It is to be hoped that hereafter we may have a census once in five years, as the general government offers to bear half the expense of the intermediate census if taken in accordance with its methods. A completer idea of the absolute sanitary condition is better obtained by calculating the relative proportion the deaths from zymotic diseases bear to the total mortality of the place, as, even if the returns are incomplete, it is not likely that they will be any more incomplete in one department than in another. With this result the proportion of deaths of children not over five years of age, or the infantile mortality, is to be compared. From these data a very correct idea can be gathered concerning the influences of local unsanitary conditions, and the direction in which efforts for improvement should be turned. This is especially true in relation to the cities and large towns, where the infantile mortality is a very good criterion. With reference to occupation, the comparative rate from consumption, which, in spite of epidemics, still holds the first rank, gives very valuable suggestions.

In comparing the returns with those of 1877, we find that the births were 572 less than reported in 1877, the deaths 314 less, and the marriages 11 less. The most notable difference in the number of deaths is found in the class of zymotics, which, as reported, caused 285 less deaths than in the preceding year,—within 29 of the total decrease. Although there were several localized epidemics of diphtheria during the year, and a large number of cases reported, the mortality was comparatively very much less, with a total of 470 deaths against 589 in 1877, a very marked difference. Nor is the balance restored by croup and scarlet fever. The mortality from the latter is about the same, while the total for the three is 983 in 1877, and 821 in 1878.

In eleven towns of the State, 300 of the deaths from diphtheria occurred; so that, leaving what might be called epidemics out of the question, the mortality would be 170. Scarlet fever was more prevalent during the first half, diphtheria during the last half of the year, and the three—diphtheria, croup, and scarlet fever,—in many instances affected the same localities. The local epidemics illustrate very forcibly the power of filth in developing, if not originating the disease, and its contagious and infectious character have been repeatedly demonstrated. The most interesting of these were two instances where diphtheria was imported into villages where no cases had before been known, and no deaths ever reported as from that cause. As these were comparatively cleanly villages; while the disease spread with intervals, for the development of the infection, over the entire area, nearly, the mortality was very slight, and all the fatal cases, with few exceptions, occurred about the middle period of the epidemic. The germs or virus of the disease—whatever may be its nature—apparently had a life history, a development, maturity, and decline. The seeming exceptions were in families where there had been fatal cases, and were of the third or fourth set of cases. In many instances the cases were very plainly divided into sets, with intervals of a week or two weeks between each outbreak. In Winsted there were two decided outbreaks of diphtheria, the latter much more fatal, while there were scattering cases meanwhile.* The disease here was introduced from without. In three instances the contagion was retained, apparently, in bedding for months, and gave rise to malignant cases and excessive proportionate mortality, in the second outbreak. The points that were especially noted in the cases investigated were: *First*, Its contagiousness, especially from the dead. *Second*, Its infectious character, repeatedly shown in many ways. *Third*, That it can arise solitarily, as Mackenzie expresses it, and in such cases usually associated with filth enough to originate almost any disease. *Fourth*, That in unsanitary surroundings the mortality was oftentimes excessive; yet, when a malignant type of the disease was conveyed to the localities in the best sanitary condition, malignant and fatal cases resulted. *Fifth*, The liability, in severe types, of all the children of a family having diphtheria if one were attacked. In repeated instances three, four, and five, in one family were victims, and in many others all the children were attacked;

* The map shows the fatal cases in each outbreak; the circle indicates the first.



Map of a portion of Winsted Conn showing location of Fatal Cases during the Diphtheria epidemics of the fall of 1878

as a rule the second set of cases was the more malignant, including most of the deaths. The cases in Granby illustrate several points of interest. In the spring there were several fatal cases in a negro settlement of three or four huts or cabins, in a clearing remote from neighbors, arising apparently solitarily; in the fall, when the same bedding was brought into use, the disease reappeared, with several fatal cases. A friend in a town adjacent came to assist in the care of the sick, and conveyed the disease to her own children, four of whom died. As the house was isolated, no cases were communicated from these.

Diphtheria is communicable, that is, contagious directly to a greater or less extent, and exceptionally may be conveyed to a third party without the medium of communication having the disease; it is infectious, especially from the dead; the germs have an indeterminate longevity,* attach themselves to the walls of rooms, bedding, clothing, and the like. Except in favorable atmospheric conditions the area of its diffusion is quite limited; with the conditions favorable to fungoid growth, of which dampness is one essential, the germs may be wafted over large tracts of country. The disease as it occurs *solitarily*, that is, isolated cases or sets of cases, is usually associated with bad sewerage, drainage, or filth, to use the most comprehensive term. These cases are generally milder when it is essentially a filth disease, apparently arising from organic impurities of air or water, in the cities with bad sewerage, in the country with saturation of the soil about the house with slop-water from sinks or carelessly thrown out of back doors or chamber windows, and oftentimes from contamination of the wells, even direct communication of sink drainage and well, as in the case of the family destroyed in Orange, and many less striking instances. The occurrence of the disease in well-drained localities, which are apparently in the most perfect sanitary condition, is generally traceable to contagion, infection, or the prevalence of epidemic conditions.

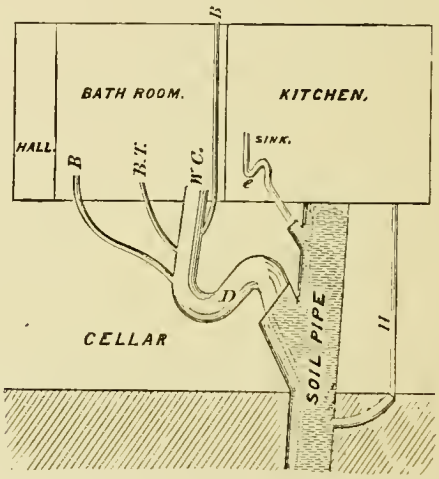
The Pittsburgh epidemic of 1877 illustrated forcibly the influence possibly inherent in sewer-gases. The condition of the sewers in the infected district where nearly half the 465 deaths occurred, and which was the center from which the disease spread by contagion, is thus described: "In the sewers traversing this district a

* Direct proof of vitality for three years, that is, dormant for three years and then producing the disease, is given by Mackenzie.

solid mass of filth had accumulated from one to three feet in depth. *None of the street wells were trapped;* a slaughter-house emptied its refuse at the intersection of the sewers running through the two streets in the infected district. The main sewer at the time of the outbreak had not been flushed for twenty-one years." Immediately preceding the outbreak was a summer storm of unusual severity, which, flooding this obstructed sewer, suddenly forced its poisonous gases in unusual quantities into the houses—as the outlet of the sewer was under water, and the sewers unventilated except through the houses. The outbreak of diphtheria occurred in a few days after the storm—which, as stated, forced up the poisonous gases and also the solid filth of years' accumulation. In Boston, during the prevalence of diphtheria, from 1875 to 1877, a careful inspection showed a greater prevalence of the disease in certain of the better parts of the city, immunity in some of the filthiest; and a house to house inspection by experts "presented nothing objectionable in point of drainage and general cleanliness in 47 per cent. of the houses in which the disease occurred." The inference has been widely drawn from this that filth has not the causative relation that has been claimed. This, however, will bear a different interpretation when all the elements of the case are taken into consideration. The sewers in certain portions of the city were in as bad a condition as those of Pittsburgh, and of course the whole city was connected by these underground channels. The ready transmission of diphtheria and scarlet fever through the medium of sewers is well established, even if they are not thus caused: not only do the specific germs find there the most favorable conditions for maintenance, but the discharges from the throat in diphtheria, and the branny scales in scarlet fever, are readily wafted from place to place by the warm, moist air of sewers. Thus, in Glasgow, the lowest death rate from diphtheria during three and one-half years was in houses having no connection with the sewers, and the highest in those having water-closets and sinks. If the sewers in Boston had been well ventilated, to say nothing of having been flushed, and if there had been any disconnection between outside drains and house-pipes invariably, the evidence of no connection between the spread of the disease and sewer gas would have been more conclusive. The unsanitary conditions found in 53 per cent. of the houses leaves but a small part for infection and contagion to play—well-recognized factors in the spread of the disease. In ordinary conditions the germs of diphtheria trav-

erse but small areas, but in epidemics may be wafted to a considerable distance from their focus. The prevalence so marked in some of the best drained and cleanliest portions of the city showed perhaps a greater amount of material for the disease to feed upon. In the slums, by law of survival of the fittest, many had become acclimated, so to speak, and the local nidus for the development of the disease in the individual was lacking. The whole illustrates in the most forcible manner how closely the portions of a town or city are allied in their interests, and that all portions must be in at least passable sanitary conditions, as well as one's immediate surroundings.

The importance of a thorough protection of the sleeping rooms of children by careful trapping and ventilation of the waste pipes cannot be overestimated. One of the most common defects is illustrated by the following sketch, which was accompanied by three deaths from diphtheria in one family; essentially the same conditions have been often observed in connection with prevalence of diphtheria.



B., pipe leading to basin in bath-room and sleeping rooms above, both untrapped; B. T., bath-tub; W. C., water-closet. The soil-pipe ran against the wall of the house to the third story. A few dollars in carrying it up through the roof would probably have saved these wasted lives.

One large trap in the cellar is supposed to be ample protection, and gives rise to a false sense of security. This was a lower ten-

ement; the soil-pipe running to the third floor—and as it was not ventilated, nor the traps either, every time the bath-tub was used, the trap of the kitchen sink was syphoned, and every time the bath-rooms in the floors above were used, the trap in the cellar, as well as that under the sink was syphoned. The other pipes untrapped led to basins in bath room and sleeping rooms, and when the main trap was syphoned, acted as direct channels for the admission of sewer-gases to the sleeping rooms of the children. The other pipe running through the cellar was from the kitchen sinks above, and opened into an earthen tile which passed directly to the main soil pipe, undisturbed by any trapping; this, while preventing the sewer gases arising in that drain pipe, did not improve the air of the cellar at all. There was also another unsanitary arrangement in the situation of the bath room and water closet in the centre of the building, where ventilation was almost if not quite impossible. This situation of a bath room, etc., is too frequently seen, and often causes harm and death.

I might go on indefinitely enumerating the instances where, in all probability, diphtheria originated from filth. Enough, however, has been said to show that there are three points to be constantly borne in mind,—its possible origin and transmission by filth, that it is contagious or communicable, and infectious. In guarding against these elements of diffusion, we can hope to protect health and life from this foe.

The following table shows the deaths from the principal zymotic diseases by counties:

	Hartford.	New Haven.	New London.	Fairfield.	Windham.	Litchfield.	Middlesex.	Tolland.
Population—'70,	109,000	121,000	66,000	95,000	38,000	48,000	36,000	22,000
Diphtheria,	66	103	98	109	20	44	19	5
Scarlet Fever,	39	132	3	21	4	11	2	0
Croup,	24	61	18	29	17	6	8	4
Typhoid Fever,	38	52	30	34	33	27	25	15
Diarrhœal diseases,	130	135	84	72	81	31	48	20
Malarial Fevers,	28	68	3	21	1	2	2	0
Cerebro-Spinal Meningitis,	6	12	6	10	3	5	2	3

The increase in deaths from malarial diseases is very marked; typho-malarial fever is credited with seventy-six deaths against twenty-three last year, and the total from all forms of malarial fever, 146 in 1878, 73 in 1877—the increase mainly in New Haven, Hartford, and Fairfield counties. Cerebro-spinal meningitis ap-

parently has become endemic, as the mortality is about the same, and diffused pretty uniformly over the State. The mortality in Fairfield county from malarial fever is confined to ten towns, mainly near the shore; in Hartford county, Hartford, East Hartford, and Wethersfield report four each, New Britain three. It appears to have become endemic in East Hartford, especially in the lowlands near the river. Nine towns report one death each; the remaining sixteen report no mortality from malarial fevers in 1878. From New Haven county fifty of the deaths from typho-malarial are reported. In Hamden and vicinity the greatest mortality is reported, and here malarial fevers of a pronounced type have been prevalent for several years. Thirteen deaths in Hamden and five in North Haven, all but two reported as typho-malarial, indicate necessarily a large sickness rate from malarial fevers. Five deaths from malarial fevers were reported in 1877 from Hamden, classed as congestive three, and typho-malarial two; two deaths are reported in 1876, one congestive chill and one intermittent fever. The first case originating in Hamden was reported in 1863, and was among the first in that region. I have not yet been able to learn when the first fatal case occurred there. The natural drainage of the immediate region was extensively interfered with by the flowing of large areas of land in 1860. Since then malarial fever has been endemic, affecting nearly every inhabitant, and has prevailed more extensively than anywhere else in the State. Whether this has been a focus from whence malarial fever has spread over certain portions of the State or not, is an interesting question, or whether there was any causative relation between the retained ground water and the malaria. There were eleven deaths reported from New Haven, ten from Derby, typho-malarial; Branford, Meriden, and Wallingford report five each. Ten towns out of the twenty-five reported no deaths from malarial fevers. The mortality reports are not guides for the existence of malarial fever, as judging from its development and spread in Connecticut since 1863, several years prevalence precede any direct mortality from this cause. As we have seen, it is only since 1877 that it has figured to any extent in the mortality lists.

The relation to typhoid fever is shown by the following table of the relative mortality for the past ten years, 1878 down to 1869:

Typhoid.	Malarial.	Total.
252	143	395
321	73	394
327	22	349
449	21	470
370	38	408
430	30	460
506	29	535
352	19	371
427	15	442
458	9	467

Intermittent fever appears a few times since the registration reports were published, credited with one death previous to 1860. In 1861 three deaths are credited, and it thenceforth appears regularly until 1863, when it skips a year, then appears steadily until the present, averaging, including remittent fever, ten deaths from 1864 to 1869. The table shows their relative mortality since.

The deaths from hydrophobia are about the same—seven, five of which are in Hartford county, one in New Haven county, one in Litchfield.

The deaths from accidental causes figure largely this year. The Tariffville disaster and the tornado at Wallingford swell the list considerably. A very unusual number of broken necks from falls down stairs, or otherwise, is a curious fact; also the number found dead in bed, drowning, and death from lightning, are noticeable, while the number of homicides and suicides is anything but creditable.

C. W. CHAMBERLAIN, M.D.

HARTFORD COUNTY.

Dr. W. A. M. Wainwright, *Chairman of Committee on Matters of Professional Interest in the State:*

Dear Sir,—I have the honor to present for your review certain summaries derived from replies to the Committee's questions pertaining to Diphtheria, received from sixteen physicians residing in representative parts of this county.

Summary from replies to Question First—"Has Diphtheria increased in your vicinity during the past five years?" Affirmative answers, ten; negative, three; no reply, one.

To Question Second, "Has its type altered *markedly* during the same period?" Affirmative, ten; negative, three; no reply, three.

To Question Third, "Is it more or less amenable to treatment than formerly?" In the experience of nine physicians it has been more "amenable to treatment"; in that of one, less; in that of five, neither more nor less; no reply, one.

To Question Fourth, "What in your experience has been the ratio of deaths?" The ratio runs, in twelve replies, from four per cent. to sixty; average twenty-six per cent.

To Question Fifth, "In what percentage of cases have you been able to trace its cause *directly* to bad sewerage or drainage?" Three have been able to trace its exciting cause directly to bad sewerage or drainage; four have not been able so to trace it; two have and have not; one is thus far in doubt.

To Question Sixth, "Does it begin, in your opinion, as a local or a constitutional disease?" Four believe it to begin as a local disease; nine, as a constitutional; one, as a local or constitutional, according to circumstances; one is uncertain; one believes it to be contagious, but dodges the question.

To Question Seventh, "In treatment, do you rely mainly on local or constitutional medication?" Two rely mainly on local medication; seven, on constitutional; five attach about equal importance to each mode.

To Question Eighth, "What do you consider to be the *best* topical application?" One applies nitrate of silver; one, sulphate of iron in powder; one, permanganate of potash; one, hydrochloric acid; one, the vapor of alcohol; one, the spray of lime water; one, nitrate of potash; seven, chlorate of potash; six, muriated tincture of iron; four, carbolic acid.

To Question Ninth, "Does the virus of diphtheria become more malignant by transmission through one human organism?" Twelve reply no; one reports a single affirmative case; two express uncertainty.

To Question Tenth, "Is it ever developed by the successive transmission of non-specific sore throat?" Fourteen reply negatively; two, affirmatively; two express doubt.

It appears from these summaries that, in the experience of two-thirds of these sixteen physicians, diphtheria has in the past five years increased; that in the experience of two-thirds, its type has not markedly altered, that it is more amenable to treatment than formerly; that the ratio of deaths has been twenty six per centum; that a majority of one do not trace its cause directly to bad sewerage or drainage; that a two-thirds majority believe diphtheria to begin as a constitutional disease; that only two rely mainly on local medication, the rest on constitutional alone, or constitutional with local; that the popular topical remedies are chlorate of potash, muriated tincture of iron, and carbolic acid; that only a single case is given where the virus seemed to have become more malignant by transmission through one human organism; and finally, that only two have had reason to believe that it is sometimes developed by the successive transmission of non-specific sore throat.

With these summaries, I also respectfully submit for your disposal several interesting and instructive replies entire.

L. S. WILCOX, M.D.,
Reporter.

DR. SHEPPARD, COLLINSVILLE.

In reply to your circular of March 20th, I have to reply:

During the first three and a half of the past five years, I had but seventeen cases—four of them ending fatally. During the last year and a half, I have treated forty-one cases, with only two deaths. I attribute the better success to more thorough local treatment than formerly.

Once only have I been able to *trace* its origin to bad sewerage, where I could *eliminate every other cause.* That case was as follows:

In the spring of '77 I was called to attend a child taken sick quite suddenly, and at once diagnosed diphtheria. The child lived in the middle of three tenements upon the ground floor of a building known as "The Old Hotel," it having served in that capacity many years ago. Three days following the commencement of this case of diphtheria, a young woman in one of the adjoining tenements was attacked with fever which proved to be typho-malarial in character, and in two days more a child, in the other one of these three tenements, sickened with

cerebro-spinal meningitis. Search for the cause revealed the fact that their sewerage was conducted into an old well, standing about fifteen feet to the rear of the middle tenement. The well was covered with a flag-stone and there was no ventilation except through the untrapped pipes into the dwellings. A sudden rise in the river two days before had caused the contents of the well to rise several feet and of necessity forced a corresponding quantity of sewer gas into the house, thus producing in two days diphtheria—typho-malarial fever in five days, and cerebro-spinal meningitis on the seventh day. None of these diseases existed in our village at the time, nor had there been, to my knowledge, a case for some weeks previous, and none of the patients had been away from home recently. It is worthy of note, also, that other members of the same families suffered at this time from cervical and facial neuralgias, and sore throats.

In my opinion, diphtheria begins as a *local* disease. I rely mainly on local treatment. Consider ferri chloridi and carbolic acid the best local means. Do not think diphtheria becomes more malignant by transmission through one human organism. Have never seen diphtheria developed by the successive transmission of non-specific sore throat.

Dr. H. Gray, Bloomfield.

I remember only one fact which indicates increased malignancy in transmission. In a family where three cases of malignant diphtheria occurred, all fatal, the first case lived a week, the two others, which seemed to take the disease from the first case died in forty-eight hours, not from mechanical obstruction of the larynx, but from the overpowering nature of the disease.

REPLY TO THE CIRCULAR OF COMMITMEE.

Rufus W. Griswold, M.D., Rocky Hill.

Diphtheria has diminished in frequency in this town for the past five years. From 1861 to 1867 inclusive, there were 22 deaths returned—but six in the eleven years since, and but one death during the last five years. This about represents the prevaleuce of the disease. The type has been much less severe.

After considerable experience with diphtheria, I am uot certain that I have been able to trace *any* percentage to bad sewerage or drainage as its exciting cause. I am in doubt, and the basis of doubt is this: while cases suddenly occur in proximity to unsanitary surroundiugs, and appareutly, obviously perhaps, are excited by those snrroundings, it is just as certain that other eases occur where the sanitary conditions are perfect. In other words, quoting Dr. Jaueway, as given by our friend

Dr. Lyon, three years ago, "Cases of this disease are met with in which, after the elimination of contagion, the most scrutinizing investigation fails to detect the presence of filth in any form." This seems to say that there is some other *necessary* factor; and when we find that that other factor is potent enough to give us the disease without the aid of unsanitary conditions, and where nothing of the kind can be found possibly chargeable as an exciting cause, it is not unreasonable to entertain some doubt as to a relationship between existing filth and co-existing disease in contiguity with each other. Conclusions as to effect and cause are often untenable. When I have met cases of diphtheria in the winter or early spring, in close and ill-ventilated dwellings, surrounded by the accumulated filth and rubbish of an expiring winter, the first conclusion deduced has been that the exciting cause was patent and unquestionable: but when I have met other and equally malignant cases in the autumn, in families scrupulously clean, living in isolated houses, through which the winds from fragrant woodlands and fields had easy access night and day, the first conclusions have been so rudely shaken that I am compelled to question whether the filth and vitiated atmosphere of the first cases had any more connection with them, as exciting causes, than had the fragrant fields and free winds with the origin or development of the other cases.

Diphtheria begins as a constitutional disease as truly as typhoid fever. A case in point. Mrs. G., of Wethersfield, was at my residence on the evening of February 15th last. Had not been feeling well through the day. Went to a meeting that evening; had severe rigors while there; returned, and after trying to get warm, went home. Had high fever come on in the night, and severe pains all over, and especially of the arms. I found her in this condition the next day. No sore throat—no indications of diphtheria. The season, and some exposure, made pneumonia much more probable. The next day the disease localized itself in the throat, and developed very slight exudation. The constitutional disturbance in this case was severe, and preceded any appreciable localization in the throat by forty-eight hours. And this is like the history of a great many cases. It argues a constitutional diphtheritic poisoning preceding any local trouble.

Mild cases, with little constitutional disturbance, and but moderate amount of deposit, I treat often entirely locally. Many such cases are taken care of by the family in this way. Most of such would get well without any treatment at all. But in cases of much severity, I rely mainly on constitutional treatment. I use locally a saturated solution of Nit. Potassa; by gargle and an atomizer. I think that in the majority of instances, the tendency of communicated cases is to be less and less malignant. But it is often the reverse; the question is difficult to answer. The answer to this question may depend upon the answer to others. Is non-specific sore throat transmissible? Is the sore throat of

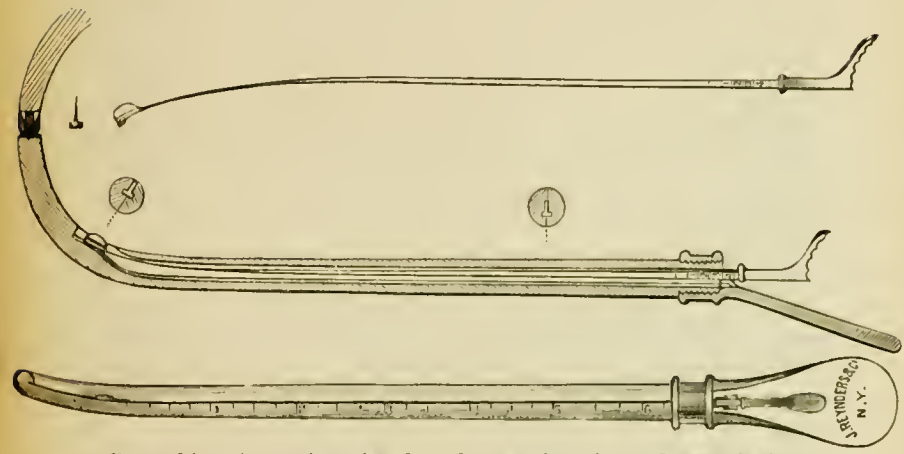
an ordinary "cold" contagious? Do we "take" from preceding cases acute non-specific inflammation of the fauces? or acute tonsilitis, or pharyngitis, or laryngitis, of non-specific form? Unless these non-specific inflammations are contagious, in the same way as diphtheria itself is contagious, then there can be no truth in the theory that a diphtheria can be developed out of them into another person. That a non-specific sore throat may *grow into* a diphtheria in the same person is possible, as also that it may have the latter *implanted* upon it; and this without raising the question of contagiousness of the non-specific forms. There is a better way to arrive at a solution of the point here involved. And the first step is to appreciate the *fact* that we have cases of *diphtheritic* sore throat in which there is not one particle of membraneous deposit, just as we have cases of measles without any symptoms of catarrh. A case of this non-exudative diphtheritic sore throat (abortive diphtheria) introduced into a family is sometimes the starting point of other cases, which, even at one remove, may show membraneous exudation, and true diphtheria. The difficulty lies in determining whether or not (and the point is not always easy to determine) the first case was specific or non-specific. If, because there is no false membrane in the first case, we call it non-specific, the theory alluded to in our circular will seem to be corroborated by the development of subsequent cases. I have observed such seeming corroborations. But careful consideration and analysis have shown that those first cases were as really diphtheritic as the subsequent fully-developed typical ones. This explanation seems to me more rational, and more in accordance with known facts—certainly more fairly deducible from my personal observations—than the theory which necessarily includes the doctrine of the successive transmission of non-specific sore throat.

THE URETHRAL INCISING SOUND.

By George C. Jarvis.

The instrument which I now bring to the notice of the profession is intended to be used chiefly in resilient stricture, and some cases of intractable gleet. It resembles the ordinary steel sound with the Van Buren curve. To all intents and purposes it *is* a steel sound, and they are made in size from number twelve to twenty. There are some important differences that enable it, without greater ado than the introduction and withdrawal of a mere sound occasions, to become a urethrotome more precise in its action and certain of its effect than any other in use, while its operation may be so limited that there is an entire absence of both danger and difficulty. The differences present them-

selves, first, in a graduation scale of six degrees, with halves and quarters indicated on the staff of the instrument, without, however, impairing its smoothness in the least. Next, the handle of the sound is bent obliquely downward to make room for another straight, narrow handle, the end of a steel spring, which projects from the hollow centre of the staff. Finally, and the most important, though least prominent alteration consists of a narrow slot, equal in length to half a degree on the scale, and situated on the concave side of the curve just where it joins the staff.



By pushing the straight handle of the spring forward, a small sharp blade is made to project from the slot, which, running in a convex groove, increases the farther it is pushed, until in the center of the slot it attains an elevation of little less than three millimeters above the surface of the sound.

If pushed further, it does not diminish again, and in order to disappear, must be withdrawn forward into its original place. On the steel spring next to the handle, and where the operator always has it in sight, a small scale is marked of the length of the slot, and this describes by its divisions whether the knife is couched; whether it has attained a quarter or a half of the slot—the latter marking its highest elevation.

Now for the manner of its application. A stricture has been diagnosed in any portion of the urethra. It has been dilated as far as it can be with comfort and safety, and now presents a resilient ring of a certain lumen which will bear no further interference without pain and constitutional disturbance.

Or, again, it may be a case wherein the surgeon decides to use the knife from the beginning. In either instance an accurate measurement is made of the distance of the stricture from the meatus, and also is the stricture located from the outside as nearly as possible. Then this dis-

tanee is measured off from the conical end of the sound, and three-quarters of a degree added on the staff of the instrument, three-quarters of a degree being the distanec from the point of the sound to the centre of the slot. When, then, this instrument is introduced, just the same as a common sound, and up to the full length indicated, there is a close certainty that the centre of the slot is opposite the point of stricture. Of course the blade is couched, its handle projecting from the end of the staff to the full length of the slot which is marked thereon.

Now the operator, who has also located the stricture from the outside, ascertains whether the shoulder of the sound is at the point selected.

If so, the slot on the upper side is in precise position. Holding the handle of the staff with the right hand, the thumb of the same hand is set against the handle of the spring which terminates in the blade and pushed rapidly forward. Then changing to the opposite side of the handle it may be easily and rapidly withdrawn. The distance to which the spring is pushed determines the depth of the incision—if to the second line on the scale, it makes the deepest cut, a little less than three millimeters.

And now the instrument is withdrawu with as little inconvenience as a simple sound.

Should it be proposed to cut several strictures near each other, the length of the canal thus infringed upon will be measured, and, when the blade projects, the instrument is withdrawn to that extent. If it is deemed necessary to incise the whole canal, then, with the blade set, the instrument is simply withdrawn, slitting its furrow as it passes.

In either case every relation can be exactly measured and determined by the scale, and every intention precisely carried out, without more or less than is desirable. The whole application is not a whit more difficult than the ordinary passing of a sound.

There is still a point wherein this instrument possesses advantages.

It is easily cleaned. That with a urethral instrument is of no small importance. The handle of the sound is unscrewed and thus releases the staff, which is taken apart in two halves, joined at the point by a projecting hinge. When thus opened, the hollow space is disclosed wherein the steel spring and blade lie loosely.

It may then be noticed that at the bottom of this space is a thin groove in which runs a little point under the blade, that serves as a director.

The whole is accessible in every point for cleaning.

I have named this instrument the "Urethral Incising Sound," as it is intended for the treatment of intractable cases of gleet and recurrent cases of stricture, especially in the pendulous portion of the urethra.

I have preferred it to any other instrument of this kind for the following reasons:

First. It is more easily introduced and withdrawn than any other, presenting, in fact, no greater difficulties than an ordinary sound.

Second. By a concealed blade it may be made to incise any specified portion of the canal, and *no other*, and again can be made to incise the entire length if desired.

Third. In my hands it has been entirely safe, and seems as if it could hardly be so used by any medical man as to do either harm or fail of its purpose.

Fourth. It can be cleaned perfectly, and with the greatest ease.

DIABETES MELLITUS RUNNING A RAPID COURSE.

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

Mr. J. T., aged 18 years, height about five feet ten and a half inches, well built, of fair complexion, and light brown hair, a student of Trinity College, was first seen November 12, 1877, at 8.30 P.M. He entered his room, where I was waiting for him, with a trembling, unsteady gait, hat and clothes on; had been out to urinate. His countenance was haggard and voice weak; he had attended recitations that day, but was excused from reciting. I found his hands and skin very cold, pulse ninety and very weak. He said that he felt weak, but was inclined to make light of his illness. He was constantly tormented with thirst, and was drinking large quantities of fluids, water, tea, and milk, and he was passing water very frequently and in large quantities; he told me that he was up five or six times in the night to urinate. I directed him to cease his studies at once, to remain in bed, to preserve all the water that he passed during the next twenty-four hours, and to send me a specimen in the morning for examination. During the next twenty-four hours he passed ninety-six ounces of urine; its specific gravity was 10.34, and, by both Fehling's and Trommer's test, sugar was found in considerable quantity. His appetite, which up to Monday the 12th had been greedy, now fell off, and he wanted liquids only. On Tuesday he was weaker, though abundantly supplied with beef-tea and cream. Quinine and brandy were also given, but the patient grew worse rapidly, so that by Wednesday morning it was evident that he could live but a little while longer. His nails were blue, and the surface of the body bluish from capillary congestion.

Dr. Wilcox saw him with me at 11 A.M., and subsequently examined the urine with me at my office.

He died Thursday morning, November 15th, at 7 A.M.

I learned from the patient that before returning to the College, September 14, 1877, he had not been troubled with thirst, nor did he pass any more urine than usual; he was quite positive on these points, and his parents have since confirmed his statements.

The patient also informed me that his thirst and increased urination had begun about a month previously, and that during the last month he had lost in weight thirty pounds.

The reasons why he went into collapse and died so quickly, were, so far as I can see, mental labor added to the exhausting effects of the disease.

He kept up as long as his appetite continued; when this declined he sank rapidly. There were no complications that I could discover, no albuminuria, no headache up to the last day, no chest disease, no fever.

A VERY FAST PULSE WITHOUT AN ASCERTAINED CAUSE.

A gentleman, aged 67 years, of excellent habits and general health, accustomed to considerable exercise, consulted me at four P.M., February 26, 1878, at my office, saying that he had taken cold, had lost his appetite and spirits, and did not sleep very well.

On looking him over I found evidences of a slight bronchitis; but what arrested my attention was the fact that his cardiac pulsations were 144 per minute; the respiration was eighteen; there was no fever; there was nothing to account for the rapid pulse except the bronchial catarrh. I directed counter-irritation to the chest, a cough-mixture, and perfect rest.

The patient continued to consult me at my office, and though the bronchitis disappeared after a few days, the pulse remained 144.

The heart was found to be normal in size, and there were no murmurs present. The organ was displaced downwards and slightly to the left, so that the apex beat was in the sixth instead of the fifth intercostal space; but this was not due to hypertrophy of the left ventricle, as the base of the heart was correspondingly depressed. The lungs were sound. The urine was carefully examined, and found to be perfectly normal. Quinine and the Tincture of Digitalis were given, but without any effect upon the pulse.

I concluded, after observing the case a few days, that there was fatty degeneration of the left ventricle, and felt that the prognosis was very grave.

The patient went to New York and consulted Dr. Janeway, who confirmed this diagnosis and found slight emphysema of the lungs.

August 28th the pulse was still 144 per minute; the patient was about town attending to his business, and had been so ever since the improvement in the bronchitis, which lasted only a week or ten days as above stated; his general appearance was natural, extremities warm, skin of good color; he felt a little weak and incapable of much exertion, but seemed otherwise well. September 21st had an attack of cholera morbus; during the attack he noticed that his pulse was beating slower. September 22d, 9 A.M., I found the pulse 98 and regular. From this time to the present his pulse has been between 70 and 80 per minute, and he has felt well and vigorous. His apex beat is still in the same situation, the pulse is 76, and of good strength, there are no murmurs, and he appears to be in excellent health in all respects.

A CASE OF COMPLETE PLACENTA PRÆVIA, WITH REMARKS.

E. P. Swasey, M.D., New Britain.

Mrs. W., æt. 35, Irish, housekeeper, to whom I was called in the evening of the 19th of December, 1878, on account of sudden uterine hemorrhage. According to her calculation, she was then seven and one-half months advanced in her fourth pregnancy, and had enjoyed excellent health during this time. I had attended her in the three previous, the first labor having been terminated with the aid of forceps applied at the superior strait. A considerable hemorrhage followed the delivery of the child, and it was found that the placenta was attached low down, but not involving the os. Severe inflammatory fever followed this labor and retarded complete convalescense for several weeks. The second and third labors were normal, with only the usual loss of blood, but the third was succeeded by a violent chill occurring about thirty-six hours after the birth of the child. Immediately after the chill came high fever, the axillary temperature reaching 105°, severe pain over the region of the uterus, complete suppression of all discharge, and a quick, irritable pulse. The chill occurred in the afternoon, and tr. verat. virid. gtt. ij. every four hours, and opium gr. j. at a like interval and alternating with the former, were ordered. The next forenoon quin. sulph. gr. xxx. were given, in anticipation of an increase of the fever towards night. At five P.M. I was called by the husband, who thought her to be dying. I found her bathed in a copious perspiration; there was complete recession of the fever, and from this point she made a speedy convalescence.

On my visit to her, on the 19th of December, I found, on examination, the os high up, directed towards the sacral promontory and quite impervious to the finger. The flowing was slight, unaccompanied by pains, and readily yielded to opium and rest in bed. The next morning the flowing had entirely ceased, and, contrary to explicit instructions, she resumed her household duties the same afternoon. On the 8th of January, 1879, I was again summoned to the bedside of this patient and found she had been flowing a second time, and on this occasion there had been slight uterine pains. She had done the family washing on the day previous. Immediately on the appearance of this second hemorrhage, she had gone to bed and taken an opium powder, so that on my arrival, several hours later, I found the bleeding had ceased. During the time between these two attacks she had enjoyed good health, and had been free from pain. Heedless of advice, however, she was up again the following day, and ten days later she had a third attack of which I was not informed at the time, it yielding to the same treatment as on the previous occasions.

At 7.10 A.M., on the 25th of January, I was called hastily by the husband, who stated that she had had "a terrible flowing" at 5 A.M. Repairing to the house as quickly as possible, I found my patient in a

most alarming condition. The hemorrhage had for the time being ceased, owing to the excessively weak action of the heart, its pulsations reaching from 140 to 150 per minute, varying between these numbers, and almost imperceptible at the wrist. The vagina was filled with clots, and the finger detected the os dilated to the size of a silver quarter, and the placenta entirely occluding the passage. This examination was carefully made to avoid a renewal of the hemorrhage, and it was for obvious reasons impossible to ascertain the position of the child by this method, but external examination revealed its transverse relation to the mother. During this time I had sent for Dr. Coholan, who quickly responded, and he decided with me that turning and delivery should be accomplished at once. Accordingly the patient was placed tranversely on the bed, the hips being brought to the edge, the limbs being held, as in the application of forceps. There was at this time no outward show of hemorrhage. The patient was then anæsthetized with chloroform, and the right hand introduced into the vagina, meeting with slight resistance at the internal os. The further separation of the placenta than had already taken place was avoided as much as possible, until the spasmodic contraction of the os was overcome. This accomplished, the placenta, which was attached "center for center," was hastily detached, with the exception of a segment to the mother's left, profuse hemorrhage following. The membranes were found intact, and ruptured. The child was found lying in the transverse position, and the head to the maternal right. Both feet were seized, but in the act of extraction one slipped, which delayed the delivery. The left, which was the one retained, was held by the operator's left, and the finger of the right inserted into the right groin of the child, and delivery accomplished without more delay. The placenta, which had remained attached by the segment above mentioned during the passage of the child, was then removed, and this act was followed by contraction of the womb.

The patient was drawn back into the bed, ℥ij. of Fl. Ext. Ergot having been given by the mouth. Constant pressure was maintained upon the uterus; stimulants were freely administered, attempts made at keeping the natural temperature of the body, which was one degree below the normal point, ice inserted into the vagina and to the fundus, to renew uterine action, which had quite disappeared. The patient awoke to full consciousness very soon after delivery, but this was interrupted by repeated and rapidly increasing attacks of syncope. The wrists were pulseless, and the systolic sound of the heart lost. All efforts at rallying the patient were futile, and continuing to fail, died about one hour and thirty minutes after the delivery.

The act of delivery was quickly accomplished, and the respiration of the child, which only manifested itself by one little gasp, was, after persistent efforts, completely established. The child apparently had not materially suffered from the fatal flooding of the mother.

When the last hemorrhage (previous to the birth of the child) occurred,

the patient rose from the bed and sat upon an *empty* vessel. This blood was afterwards poured into a clean pail, and it was ascertained by actual weight that this immense clot weighed just five pounds, after subtracting the weight of the pail.

Remarks.—Few cases, perhaps, offer more ample food for reflection than the foregoing, and as a result of such reflection, it appears to me that a fatal termination could have been avoided had I, instead of resorting to a temporizing, decided upon a more radical method of treatment on the occurrence of the second hemorrhage. It was quite evident that I had to deal with a case of placenta-prævia, yet the hemorrhage yielded so readily, that any other seemed meddlesome treatment.

Reviewing the subsequent history of the case, however, it is evident to my mind that the tampon was the treatment *par excellence*, to which I should have resorted. Its use in such cases has been advocated by high authority, and it seems the most rational and at once the safest treatment to pursue, both for mother and child, and this, too, in face of the fact that its employment is most likely to induce premature labor. Without it the inevitable and repeated losses of blood to which the patient is exposed render the ultimate safety of the mother and child a matter of the greatest uncertainty, whilst its employment, though it bring on labor, makes it quite impossible for such a terrible hemorrhage to occur as we have seen in the above case, and gives to the child, I believe, at least an equal probability of life with the former.

Not only does this appliance render the patient safe from repeated hemorrhages, but it also, by checking these losses, removes her from those increased dangers to the lying-in which find such ready ingress after such flooding.

The difficulty of determining the extent of abnormal placental attachment, before the os admits of digital exploration, is great, if not impossible, and therein lies the difficulty of always deciding the cases in which we should apply the tampon, but where two or more hemorrhages have occurred in the latter weeks of pregnancy, with a certainty that more will follow, I think I am justified in saying, from the experience of this single instance, that we should allow no fear of premature labor to interfere with our using this valuable agent. Now the application of a treatment resulting from such reasoning would, I think, have saved the life of a patient, and if in my experience a like one should present itself, I should unhesitatingly adopt this course, considering it the best. In no emergency could treatment appeal to the reason with greater force than does this, for with it we have control of the bleeding, and can accordingly complete all preparations for the delivery without excitement or confusion, confident that our patient is not, in the meantime, suffering from a continued loss of blood.

A word in regard to the use of chloroform. The state of the os uteri hardly demanded it, for the excessive loss of blood had rendered any seri-

ons obstruction to the passage of the hand as quite improbable. The chief reason of its use was for the purpose of preventing the additional shock to an already greatly-enfeebled heart which the introduction of the hand into the uterus would have occasioned without it. A year ago it was my privilege to read before this society a paper on the influences controlling uterine hemorrhage, and I mention this incidentally because it gave me an excellent opportunity of observing the inability of the uterine vessels to control hemorrhage unaided by the uterine fibre.

ACUTE RHEUMATISM TREATED BY SALYCILIC ACID.

R. M. Griswold, M.D., North Manchester.

The following cases of rheumatic fever, coming under my care the past winter, were treated with very satisfactory results by salycilic acid. Two of the patients had never before suffered with the disease. One of them had a severe attack, lasting for several weeks, the previous winter, and one a slight attack about six months before. In no case could I detect that the rheumatism was in any degree syphilitic or gonorrhœal, or other than simple acute rheumatism.

Case I. J. M., paper-maker, aged 26. Had never had rheumatism before. Parents not subject to it. His occupation obliged him to stand much of the time in water, and was often wet to the waist. When I first saw him, November 10, 1878, his left ankle and knee, left wrist and shoulder, and right knee were most affected. Temperature 102°, pulse 112. Could detect no abnormal sounds of the heart, and there was no pericardial effusion. I began treatment with 10 grains of acid every two hours, administered in the following manner:

℞ Acidi Salycilici,	℥v, ℈i.
Potassii Nit.,	℥iss.
Glycerine,	℥ ii.
Aq. Rosa.,	℥ ii.

This was continued for three days without any particular result except a clearing up of the urine, which was probably due to the Nit. Pot. The third day the temperature was 103°, pulse 127. The fourth day it was 103½°, pulse 135. The acid was now increased to 20 grs. every three hours. The fifth day the pulse was 130, temperature 103.° Sixth day, pulse 125, temperature 102½°. Seventh day, pulse 116, temperature 101¾.° At the end of the tenth day the temperature was 99½°, pulse 80; and next day, the eleventh, it was normal. For three days previous to this time there had been considerable friction sound over the cardiac region, and much pain in the joints, which now began to diminish. The friction sound continuing, and there being considerable general debility, the patient was now put on mixture of calysaia bark and iron, while

acid in 10 gr. doses every three hours was continued until the eighteenth day, when the swelling and pain having entirely subsided, and cardiac friction greatly diminished, it was discontinued. Through this case it was necessary to move the bowels every third day with an enema.

Case II. W. B., aged 29, also paper-maker. Symptoms and duration of disease almost exactly similar to those of first case, marked by same high temperature and pulse, which gradually diminished under effects of the acid. Torpid condition of the bowels in this case also.

Case III. Miss B. R., aged 21, farmer's daughter. Caught cold by by being out in rainstorm. Pain and swelling in shoulders and knees the third day after. No history of rheumatism. When I saw her every joint seemed affected. Temperature 103°, pulse 137, tongue coated; very great pain, and almost entire suppression of urine. Ordered 10 grs. of acid every two hours, to be given in conjunction with one-half teaspoonful of spts. nitr dulc, and Dover's powder grs. x, every four hours. The fifth day the pain had somewhat diminished and urine was more abundant and clearer. Pulse 130, temperature 103°. Sixth day, pulse 135, temperature 103½°. Pain increased and more extended. Increased acid to 15 grs. every two hours, and gave a hypodermic injection of morph. Next day the pulse had fallen to 115, temperature 100½°. Seventh day, pulse 102, temperature 99½°. Eighth day, pulse 100, temperature 99°. There was very little cardiac friction at any time in the history of this case, but the same tendency to constipation was manifest as in the two former cases.

Case IV. Mrs. T., aged 29. Attended a dance and became chilled while riding home. Saw her second day after. Found swelling, tenderness, and much pain in both knees and right shoulder. Temperature 102°, pulse 134. Found friction at apex of the heart. Ordered 15 grs. of acid every two hours, and Dover's powder. Next day the pulse was 120, temperature 100°. Continued the acid. At end of fifth day the temperature was 99°, pulse 100; very little pain in the joints, and swelling nearly gone, but there was considerable pain in the cardiac region. Continued the acid till the eighth day, when the pulse and temperature were normal, pain in the joints entirely gone, and cardiac friction nearly subsided. Constipation was also marked in this case.

Cases V and VI. Mrs. F., aged 62; Mrs. R., aged 53. Was called to see both on the same day, and found conditions very similar in each case. Case V was convalescing at the end of the twelfth day, and Case VI at the end of the fourteenth. Cardiac friction was developed in both, and the constipation marked.

Remarks.—In none of the cases where friction was developed did the acid seem in any manner to affect it, except perhaps in Case IV, when the mitral murmur seemed to increase in volume under the effect of the acid.

2d.—It will be observed that in every case, in from two to four days both the pulse and temperature began to diminish, and continued to

do so until convalescence, and that with the decrease of pulse and temperature the pain and swelling also diminished.

3d.—It will be seen that in every case it produced constipation, which was not entirely removed in any of the cases for some time after the acid was stopped. Previous to this last winter I had used salicine in these cases of acute rheumatism, but I find the salycilic acid more certain in its action and more durable in its results. I have never experienced any bad effects from its use, and am using it to a large extent in the treatment of non-specific sore throat and diphtheria, and with better results than I am able to obtain from any other one agent.

NEW HAVEN COUNTY.

To the Chairman of Committee on Matters of Professional Interest in the State:

To the first question of the circular, as far as relates to New Haven the answer must be in the negative, if the number of deaths reported each year indicates the prevalence of diphtheria during the greater part of that period. During the four years beginning April 1, 1875, and ending April 1, 1879, the number of deaths each year from diphtheria was as follows: 1875–6, 37; 1876–7, 62; 1877–8, 74; 1878–79, 52; thus showing that the frequency of the disease has not greatly changed during these years. But these figures rather indicate that diphtheria is a constant factor of disease whose appearance may be depended upon with certainty each year until improved hygienic and therapeutic measures shall have eradicated it. Its type probably remains unchanged, but as experience is gained, doubtless the treatment is also more successful and rational so that the ratio of deaths is materially decreased. In the majority of cases it cannot be traced directly to bad sewerage and drainage but to contagion. But unquestionably bad sewerage and drainage are often the direct exciting causes. In its origin it is probably constitutional, with a local manifestation, so the treatment must also be mainly constitutional, with local measures as adjuvants, which are many and varied. The virus of diphtheria does in our opinion increase in malignancy by transmission, seeming to gather new strength as it goes, and each successive case in a given family often manifests a severer type, though this will depend somewhat upon the physical condition of the recipient of the virus at the time of the exposure. It does not appear probable that non-specific sore throat can by transmission be converted into diphtheria. Each is distinct from the other, and while they may blend in a given case, yet they do not combine, or graduate the one into the other. And in conclusion, I quote from Ertel (Ziemssen's Cyclopedia): "Diphtheria occurs sporadically as well as epidemically, and may in certain localities especially favorable to it, become an endemic disease. It develops spontaneously, its origin being a miasma, and is induced by contact with objects and persons infected with diphtheria. Diphtheria is therefore to be considered a miasmatic contagious disease."

Responses have come in answer to the questions from ten towns and eleven physicians; a synopsis is here appended.

W. R. BARTLETT, *Reporter.*

Dr. Davis of Meriden reports an increase of diphtheria during the last five years. Dr. Goodyear states that there were eight cases in one family in the vicinity of Northford, with two deaths. He did not attend the two fatal cases. There were other cases in that vicinity. No increase in North Haven.

The type is reported as more fatal by Dr. Ruickholdt of New Haven and Swift of Hamden. Dr. Davis and Dr. Chamberlain of Cheshire report it more amenable to treatment.

Where prevalent, the average mortality is reported as two-thirds. From other towns the mortality is stated as very small. Dr. Davis traces two-thirds of the cases to bad drainage. Dr. Goodyear states that where there were eight cases in one family, the well was inside the house and the sink-drain within a few feet of it; finds unsanitary conditions in a majority of cases. Dr. Chamberlain reports one or two cases. Seven report in the negative; but of these, one has seen no cases, and three, but one or two during the year.

Drs. Davis and Harrison think it may be either local or constitutional in the beginning. Dr. Goodyear states that until recently he had thought the disease to be constitutional from the beginning, but has lately thought that the virus is taken into the system and lodged in a certain locality, producing local disease from which the rest of the system becomes affected by absorption and reinfection. Seven regard it as beginning as a constitutional disease. Nearly all use topical remedies in connection with the constitutional remedies. Carbolic acid, tincture of perchloride of iron, hydrochloric acid, alcohol, and chlorate of potash are recommended.

Drs. Swift, Barnett, and Davis regard it as becoming more malignant by transmission. Two make no report, and five do not regard it as becoming more malignant. None regard it as developed by successive transmission from non-specific sore throat.

Dr. Goodyear states that he regards it as essential to recognize the disease early, and bring the system under the influence of remedies as speedily as possible. In this locality, quinine is especially indicated, on account of the malarial influence so prevalent here, as well as the antiseptic and tonic effect it may have on the system. Alcohol I regard as essential, especially in the severer forms.

The importance of early recognition is generally recognized, especially by those who use topical applications.

ARSENIC EATING.

By P. A. Jewett, M.D., New Haven.

A question has arisen, in a recent trial for murder in this State, as to the statements in most of the recent works on Materia Medica, Toxicology, and Medical Jurisprudence that there are human beings, residing in Styria and the Tyrol, who eat arsenic daily and habitually.

A notice of the fact is found in an article published by Roscoe, Prof. of Chemistry at Manchester, England. He gives a full history of the habit, as learned from Austrian physicians of Styria; and while none of them have seen the eating of the poison, the fact was sufficiently authentic to induce Prof. Roscoe to publish it in the Memoirs of the Lit. and Phil. Soc. of Manchester, and in his work on Chemistry. He has also published an article on Arsenic eating.

In Johnston's Chemistry of Common Life we also find a history of this habit, taken from Prof. Roscoe and other writers on the subject. [For a list of the authors on the subject see Note.]

In June, 1860, Charles Heisch, Esq., F. C. S., Lecturer on Chemistry in the Middlesex Hospital Med. College, published an article on the arsenic eaters of Styria, as follows:

"At the last meeting of the Manchester Philosophical Society, I observe that Dr. Roscoe called attention to the arsenic eaters of Styria. Having for the last two years been in communication with the medical men and other residents in the districts where this prevails, I shall feel obliged if you will allow me, through your journal, to make known the *facts* I have at present collected.

"The information is derived mainly from Dr. Lorenze, Imperial Prof. of Natural History, formerly of Salzburg, from Dr. Carl Arbele, Prof. of Anatomy in Salzburg, and Dr. Rottowitz of Neuhauz, besides several non-medical friends.

"If human testimony be worth anything, the fact of the existence of arsenic eating is placed beyond a doubt. Dr. Lorenze, to whom the question was first addressed, at once stated that he was aware of the practice, but added, that it is generally difficult to get hold of individual cases, as the obtaining of arsenic without a Doctor's certificate is contrary to law, and those who do so are very anxious to conceal the fact, particularly from medical men and priests. Dr. Lorenze was, however, well acquainted with one gentleman, an arsenic eater, with whom he kindly put me in communication, and to whom I shall refer again more particularly. He also says that he knows that arsenic is commonly taken by the peasants in Styria, and the Tyrol, and the Salzkammergut,

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Note.—Roscoe.—Memoirs of the Lit. and Philosophical Soc. of Manchester.

Johnston.—Chemistry of Common Life.

Headland.—The action of Medicines.

Hirst.—On the Diseases of Workmen.

Ringer.—Materia Medica, etc.

Stillé.—Mat. Med. and Therapeutics.

Bartolow.—Mat. Med. and Therapeutics.

Biddle & Wood.

Durgendrooff.—On the Detection of Poisons.

Herman.—Experiments in Toxicology.

Woodman & Tidy.—Forensic Medicine, and articles in several American and foreign journals.

principally by huntsmen and wood cutters, to improve their wind and prevent fatigue. He gives the following particulars: The arsenic is taken pure in some warm liquid, as coffee, fasting, beginning with a bit the size of a pin-head, and increasing to that of a pea. The complexion and general appearance are much improved, and the parties using it seldom look so old as they really are; but he has never heard of any case in which it was used to improve the personal beauty, though he cannot say that it is never so used. The first dose is always followed by slight symptoms of poisoning, such as burning pain in the stomach, and sickness, but not very severe. Once began it can only be left off by very gradually diminishing the daily dose, as a sudden cessation causes sickness, burning pain in the stomach, and other symptoms of poisoning, very speedily followed by death. As a rule, arsenic eaters are very long lived, and are peculiarly exempt from infectious diseases, fevers, etc., but unless they gradually give up the practice, invariably die suddenly at last. In some arsenic works near Salzburg, with which he is acquainted, he says the only men who can stand to work for any time are those who swallow daily doses of arsenic, the fumes soon killing the others. The director of the works, the gentleman before alluded to, sent me the following particulars of his own case. [This gentleman's name I suppress, as he writes that he does not wish the only thing known about him in England to be the fact that he is an arsenic eater; but if any judicial inquiry should arise which might make it necessary to use positive evidence of arsenic eating, his name and testimony will be forthcoming.]

"'At 17 years of age, while studying assaying, I had much to do with arsenic; and advised by my teacher, M. Böusch, Prof. of Chemistry and Mineralogy, at Eiselben, to begin the habit of arsenic eating. I quote the precise words he addressed to me: "If you wish to continue the study of assaying and become hereafter superintendent of a factory, more especially an arsenic factory, in which position there are so few, and which is abandoned by so many, and preserve yourself from the fumes which injure the lungs of most, if not all, and to continue to enjoy your customary health and spirits, and to attain a tolerable advanced age, I advise you, nay, it is absolutely necessary that besides strictly abstaining from spirituous liquors, you should learn to take arsenic; but do not forget when you have attained the age of 50 years, gradually to decrease your dose till, from the dose to which you have been accustomed, you return to that with which you began, or even less." I have made trial of my Preceptor's prescription till, now, the forty-fifth year of my age (28); the dose with which I began, and that which I take at present, I enclose. They are taken once a day in any warm liquid, such as coffee, but not in any spirituous liquors. The doses sent were No. 1, original dose, grains 3; No. 2, present dose, grains 23, of *pure white arsenic* in coarse powder.' Dr. Arbele says this gentleman's daily dose has been weighed there also, and found as above.

Mr. ——— continues: 'About an hour after taking my first dose, I took the same quantity daily for three months; there followed slight perspiration with griping pains in the bowels, and after three or four hours a loose evacuation; this was followed by a keen appetite and a feeling of excitement. With the exception of the pain, the same symptoms followed every increase of the dose.'" . . . .

One of the most remarkable points in this narrative is, that this gentleman began with a dose which we should consider, not only poisonous, but fatal.

"This is the only case in which I have been able to obtain such full particulars; but several others have been mentioned to me by those who knew the parties and can vouch for their truth, which I will briefly relate. One gentleman, besides stating that he is well aware of the existence of the practice, says he is well acquainted with a brewer in Klagenfurth who has taken daily doses of arsenic for many years. He is now past middle life, but astonishes every one by his fresh, juvenile appearance. He is always exhorting other people to follow his example, and says, 'See how strong and fresh I am, and what an advantage I have over you all. In times of epidemic fever or cholera what a fright you are all in, while I feel sure of never taking infection.' Dr. Arbele writes, 'Mr. Curator Küssinger, notwithstanding his long professional work in Lugan and Binzgan, knew only two arsenic eaters—one the gentleman whose case has just been mentioned, the other the ranger of the hunting district of Grozzarl, named Trauner. This man was, at the advanced age of 81, still a keen chamois hunter and active climber of mountains; he met his death by a fall from a mountain height while engaged in his occupation. Mr. Küssinger says he always seemed very healthy, and every evening regularly, after remaining a little too long over his glass, he took a dose of arsenic, which enabled him to get up next morning perfectly sober and quite bright.' Prof. Fenzi, of Vienna, was acquainted with this man, and a notice of his case was published in the Weiner Zeitung. There is also in Sturzburg a well-known arsenic eater, Mr. Schmit, who now takes daily 12 and sometimes 15 grains of arsenic. A case is also well authenticated of a man in Lincolnshire, England, who began taking arsenic for some skin disease, and gradually increased the dose until he took daily 5 grains. Dr. Stromager relates a case where a peasant in the Tyrol took for a long time 10 grains of arsenic daily with his food.

"As a proof how much secrecy is observed by those who practice arsenic eating, I may mention that Dr. Arbele says he inquired of four medical men well acquainted with the people of the districts in question, both in the towns and country, and they could not tell him of any individual case, but knew of the custom only by report. Two criminal cases have been mentioned to me in which the known habit of arsenic eating was successfully pleaded in favor of the accused. There is hardly a

district in Upper Styria where you will not find arsenic in at least one house, under the name of Hydrach. They use it for the complaints of domestic animals, to kill vermin, and as a *stomachic to excite an appetite.* I saw one peasant show another on the point of a knife how much arsenic he took daily, without which, he said, he could not live; the quantity I should estimate at two grains. It is also used in making cheese. Several cases of poisoning have occurred in Upper Styria from eating cheese. Orfila mentions the arsenic eaters. This is an interesting fact as being early and official of the habit of arsenic eating."

Dr. Frank H. Storer, in an article in Silliman's Journal, says:

"These experiments (the influence of arsenious acid upon the waste of the animal tissue) are of particular interest, as they go far to prove the reliability of the published accounts of the custom of arsenic eating, which is said to prevail among the peasantry of several Austrian provinces. These accounts have been time and again held up to ridicule by toxicologists (Christison, Chevaillier, and Taylor), and as a rule have been received with suspicion by all scientific men. Believing that direct positive evidence like the foregoing, though the instances be few, ought to outweigh almost any amount of negative testimony which has been brought forward by physicians who have not witnessed similar effects upon their *diseased* patients when the latter were treated with arsenical preparations. That arsenic acts beneficially, in minute doses, upon the general health of many persons, there can be no doubt."

Dr. Hosea Fonntain, of Pecksville, N. Y., writes me that he has been in the habit of giving arsenic combined with the ext. of nux vomica, in doses of $\frac{1}{30}$ to $\frac{1}{20}$ of a grain. That he has in many cases continued the uninterrupted use of the medicine for many months without any bad or poisonous effect. I have also an interesting case of the absoption of arsenic, from Dr. Zink, of Branford. I shall make use of this and some other similar cases in a subsequent paper on this subject.

I have not attempted to give either my own or the views of others as to the effect of arsenic on the constitution in disease, my only object being to show that it is taken in large and small doses, long continued, without immediate detriment. Nor do I attempt to explain why arsenic taken into the stomach should counteract its deleterious effects when absorbed into the system. The profession are requested to receive the above as a compilation of most of the important facts known on this interesting subject.

ATROPINE.

Effects of about one grain of Sulp. Atropia injected hypodermically.—An interesting case.

By Dr. Thomas B. Jewett, Birmingham.

W. J., of Derby, aged about 36 years, of sanguine and nervous temperament, injected under his skin one Saturday evening in December, 1878,

90 drops of solution of atropine, the solution injected containing about one grain of the salt. This was about 6 o'clock, and the patient took it by mistake, thinking the bottle of solution of atropia was a bottle of Magendie's solution which he had been in the habit of using hypodermically pretty freely. Sitting down to the supper-table his wife remarked, "Why, what ails your eyes! they look very peculiar." He looked into a glass and exclaimed, "I've taken the wrong medicine—I am a dead man." His pupils were dilated full size of the iris. The patient immediately got his bottle of Magendie and injected 90 drops, took some whiskey, and employed two assistants to walk him constantly in the open air, when at the end of 45 minutes his legs gave out, and he was taken to his home and a physician immediately summoned, who gave him additional morphine hypodermically (at first having administered sulph. of zinc and tannic acid, supposing the atropia had been taken by the stomach). Other physicians were soon in attendance. Two hours after taking the atropia the patient was in the following condition: Muscles of deglutition paralyzed, maniacal convulsions frequent, whole body presenting a puffed and œdematous condition; eyes wide open, staring; pulse 120 (which in one hour fell to 60); great heat of skin; breathing stertorous but not very irregular; tenesmus; frequent micturition; skin covered with redness, resembling scarlet fever efflorescence in first stages; inability of speech; blind, etc. Squibb's ether allayed in slight degree only the spasms. Bowels moved copiously by injection. Patient became conscious nine hours after taking the atropia, but no power over muscles of lower extremities. The following day system hot and feverish, mind clear, pupils normal, inability to speak above a whisper, pulse normal, throat dry and husky, and fauces red and congested. The throat was treated with glycerine and tinct. iodine by means of atomizer, and simple tonic treatment followed. The patient gradually improved, and was about his business in a week or ten days, and since that time has had more or less trouble with his head, a full and dizzy feeling at times, but whether this is from the effects of the atropia or the frequent use of morphine, I cannot say.

This case is not given for the purpose of throwing any new light on the action of the drug in question in large doses, but simply to lay before you the important and interesting symptoms manifested in the case. Had not the patient been well informed as to what course to pursue in case of an over-dose of atropia, by taking a large amount of morphine subcutaneously (3 grains), he would undoubtedly have died. Whether the whiskey and constant exercise in the open air had a tendency to benefit him is doubtful.

NEW LONDON COUNTY.

I am sorry that a reply from every physician in the county could not be obtained to the list of questions pertaining to diphtheria. To make a report of value, it should be based upon the clearly and positively expressed opinions of all, confirmed by experience. Many towns have not been heard from, and some have not confined their answers to the subject under consideration. From the town of Norwich I have received five replies (we number fourteen regular physicians); from New London, two; Mystic, one; Uncasville, one; Jewett City, one; Franklin, one; Lebanon, one. I regret exceedingly that we cannot have a free interchange of views on this important subject.

In reply to the first question: Has diphtheria increased in your vicinity during the past five years? I must answer for Norwich, No. This is in accordance with the opinion of all except Dr. Cassidy. He says diphtheria has increased in his practice. During the autumn of 1878, there occurred a number of cases of diphtheria and several deaths in one section of our town. These cases, with but few exceptions, were seen by one physician, as reported above. Dr. Woodward states there has been no increase in Franklin. Few cases have occurred in Jewett City. In the town of Montville, Dr. Burchard reports 36 cases, with 10 deaths, in 1877. "No very severe malignant cases since 1877." New London's record for the past six years shows a marked increase of the disease. Dr. Porter, of that city, reports the city record of mortality as follows:

DEATHS FROM DIPHTHERIA.

1873,	9	1876,	16
1874,	3	1877,	33
1875,	1	1878,	18

Dr. Nelson, of the same city, replies to the question, "No; less than usual." The difference in the opinions expressed by these physicians shows the importance of obtaining a more full report.

The one physician from Mystic (a town of considerable activity) says: "Diphtheria has been on the increase within the last five or ten years in this vicinity."

To the second question: Has its type altered markedly during the same period? there is but one opinion expressed: No.

The amenability of diphtheria to treatment as compared with former times evidently varies with the severity of the disease.

While in our own city, where there has been but little of the disease, but little change has been noticed as to the result of treatment. As to its fatality, our opinions here expressed can have but little weight. Some have not seen a case during the past year. One physician says 100 per cent.: he has seen one case, and that fatal. My experience is the same, having met but a single case of diphtheritic croup when moribund. Another from our city says: "None; I have seen only mild cases." The combined reports from Norwich, Montville, Jewett City, Franklin, New London, Mystic, and North Stonington, containing cases within the experience of the writer, give the following figures for the past five years:

Cases, 40. Deaths, 14.

I must here remind the gentlemen who have favored me with replies, that it is impossible to estimate the ratio of deaths from such replies as the following: "I have seen a large number of cases; two fatal." "Ratio from ten to fifty per cent., according to circumstances." "Small."

Of the few who report any known exciting cause of diphtheria, Dr. Nelson of New London gives cases originating where sewerage was defective, and the disappearance of the disease when this supposed cause was removed. Dr. Porter, of the same city, replies to the question: "How often traceable to bad sewerage?" "In about one-half the cases." Dr. Burchard of Montville, gives some facts of very suggestive character, and worthy of consideration in all parts of the county. Having stated there was no defective sewerage, to his knowledge, he adds: "The disease rigidly followed the course of the stream Oxoboxo; *seemed* local and riparian, (as if) malarial in its origin; no cases being more than twenty rods from the center of the stream, and nearly all school children. The school-house, sanitary condition good and not overcrowded, standing within said limits." Dr. Cassidy of Norwich, says: "The most virulent cases have occurred in localities where the hygienic conditions, it would seem, were the most perfect. During the past year I have treated a large number of cases in a locality where the sewerage was very imperfect and the hygienic conditions of the place very bad; but I think no more than it had been during the ten years last past, and, except during the past year, they have been as free from diphtheria as any other locality in the city occupied by the same number and class."

The majority of the profession who have reported regard diphtheria as local in its origin, but essentially constitutional in its character.

Both local and constitutional treatment combined is recommended.

Dr. E. F. Coates of Mystic states quite fully the constitutional treatment he adopts, which differs in some points from that recommended by others. He says, "I depend mostly on veratrum viride, first to reduce the fever; then stimulants and tonics (whiskey, tinct. ferri. muriat, chlorat. potass), and milk diet, as soon and as liberal as possible, and believe I have been quite successful. The ratio of deaths, I am not at present able to state." All others who speak of constitutional treatment agree as to the free use of iron, stimulants, chlorate of potash, and an abundant nourishment, from the outset of the disease.

As physicians' views vary as to the nature of diphtheria, so their views differ as to the requirements and efficiency of topical applications. Dr. Burchard of Montville says, "I prefer a glycerole of tannin with salicylic acid." Dr. E. F. Coates, "The best local application I have been able to make is the solid crayon of sulphate of copper." Dr. Porter of New London says, "Nothing in my experience is so successful as the sol. per. sulph. ferri, one part to 4, 3, or 2 parts of water or glycerine, used twice a day with a thick, large hair pencil, the strength varying with the severity of the case, commencing with a weak preparation, and gradually increasing, as the deposit becomes more loosely attached and of greater consistence and thickness. . I have also seen much benefit from permanganate potass. 2 grs. to 3j. If the nostrils are much involved (a grave symptom), I use a weak solution of salicylic ac. with a syringe or large hair pencil. This, and carbolic acid with an atomizer, also lime water in the same way, are often useful to the throat; to be resorted to especially if the symptoms are those of croup." Dr. Nelson of the same city recommends "Liq. ferri persulphat." Dr. Woodward of Franklin, "tinct. ferri and tinct. iodine, both diluted; the inhalation of vapors," etc. Dr. Haile of Norwich, advises a mixture of "chlorate potass. hydrochloric ac. dil.; tinct. myrrh., mel. boracis, and water." Dr. Sprague uses "hydrochloric acid and water, equal parts." Dr. Cassidy says he found very useful "frequent application to the diphtheritic membrane of the sacobarated solution of lime." The formula first recommended by Dr. Stephen Smith is valuable; it is the favorite application of Dr. Carleton and Dr. Kinney. It is as follows:

℞

Ac. Carbolici,	gr. viij.
Liq. Ferri Persulphat,	℥ij.
Glycerine,	℥vj.

M.

There is no evidence that the virus of diphtheria becomes more malignant by transmission through one human organism. There is nothing in the experience of our county that enables us to give an opinion, and it is not in accordance with any hypothesis. I can state very positively, as the opinion of the profession of this county, that the successive transmissions of non-specific sore throat do not develop diphtheria. There is but one opinion given that favors that thing; and as an interchange of views is desirable, I give the quotation from Dr. Cassidy "I believe that a neglected non-specific sore throat may develop diphtheria; but I think it is as liable to appear in an idiopathic case as that which is transmitted."

In conclusion, we can sum up the whole matter in few words. Diphtheria has increased in some portions of New London County during the past five years. Its type has not changed, it is more amenable to treatment because better understood. That the disease may arise from bad sewerage, but it arises frequently where no exciting cause is known to exist. It is a constitutional disease with local manifestations; and that the treatment is both local and constitutional; the latter most relied on. That topical applications are made to the throat, for the purpose of dissolving, destroying, or neutralizing the poison as locally manifested. That the disease does not become more malignant by successive transmissions; and that a non-specific sore throat cannot develop into that of a specific character.

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

Norwich, April 1879.

ANSWERS TO QUESTIONS.

W. P. Barber, M.D., Lebanon.

Your first question relative to the increase of diphtheria must be answered without hesitation affirmatively. I did not see diphtheria in this town until 1877. A few cases of pharyngitis were the nearest approach to the malady of anything we had previous to that time. I have seen only two cases since then in this part of the town (Lebanon Center).

I saw in the years 1877, 1878, in the village of Bozrahville—a part of it only in this town—twenty cases or more. Previous to that, there had been several epidemics of the disease which did not come under my observation, but I think I may safely say they were not as extensive as those of 1877 and 1878.

There has been under my observation two cases of fatal termination.

Here I would ask the profession their experience of this disease during pregnancy. One of the fatal cases was my own wife. I have diligently sought information from books, and personal inquiry concerning it in this connection; but have failed to find any one who had seen a case in connection with pregnancy.

I hope I may hear from some one who has had a more extensive experience, and not as sad a one. I may answer your fifth question by repeating in substance what I said last year. I have not been able to trace its exciting cause directly or indirectly to bad sewerage.

That possibly is an exciting cause, but why does it sometimes produce diphtheria, and other times dysentery and typhoid fever? In my opinion it begins a local disease. The fact that very early there is little constitutional disturbance is my argument for its local origin. It is after the absorption of septic substances that the constitutional symptoms are prominent. It seems to me there is a discrepancy in the way Trousseau regards it, being a strong advocate of its constitutional origin, and the treatment he relies so much on, which is essentially local.

Although believing it local in the start, I must answer your seventh by saying I rely more on constitutional medication from the first, suitable nourishment and stimulants, with tr. ferri mur. and quinine, than all things else. I consider chlorate of potass. the best topical application, although I always use other things as alternates. My little girl, two years and seven months of age, when in perfect health was seized with sore throat last December. After two days I observed slight swelling of the submaxillary region. Examination of the throat revealed pharynx and tonsils bright red, tonsils were enlarged, and on the right one there was a grayish, rather thick false membrane. I came to the conclusion that diphtheria had invaded my own household. I treated her with nourishing diet, quinine and iron—about 1 gr. of the former, 10 drops of the latter (tr. ferri mur.), and 2 grs. of potass. ch. once in four hours. She being rather an intractable child I did not attempt local applications. The case progressed favorably to the seventh day, the membrane disappearing. The child felt so much better it was with the greatest difficulty we kept her in the nursery. On the eighth day the first symptoms of diphtheritic croup were announced by a small dry cough. The disease increased in severity, and I had a well-marked case of laryngeal diphtheria. I determined to try the slake-lime vapor-bath, and was strengthened in this by the approbation of Dr. Chase of Colchester, called as counsel.

The child was placed on a mattress, the bed divested of everything excepting a light covering. We were fortunate in having a small room, about 10×12, with one window only. We then commenced the bath by slackening lime in pails; we kept the room saturated with this vapor. It was warmed by heating stones and throwing them in the slackening lime. I maintained a temperature of 90° Fht. The relief this treatment gave to the laryngeal symptoms encouraged me to continue it, and for eight days I persevered in it. It was frequently, it seemed to me, a hopeless struggle, but I had become satisfied it was the only chance of relief offered. On auscultating, the murmur of the vesicular expansion was completely destroyed, and I have every reason to think the membrane extended to the bronchial tubes. I continued the quin., iron. and chlorate potass., and added milk punch. After about the eighth day from the time the laryngeal symptoms first appeared, and the fifteenth or sixteenth of the attack, I ventured to gradually stop the vapor. From that time there was a slow convalescence. Albuminuria was, however, present for several weeks.

Two weeks after, or early in January of this year, I saw a child five months old with diphtheritic croup, and pursued the same course—bath, etc. I was fortunate enough to witness a favorable termination in that case also. Dr. Cassidy, of your city, saw the first case here reported; the treatment was approved by him. These are interesting cases to me, and I shall think, until I am convinced by more experience, that the vapor bath is the best and only local treatment we can rely on in diphtheritic or membraneous laryngitis, remembering of course tracheotomy.

I regret very much, my dear Doctor, my neglect to send this report until this late day, but if you should find anything in it worth while, I hope you will give it a place in your annual volume. I claim no originality in the treatment of these cases of croup; I have reported them, hoping it may encourage others to try this remedy more frequently.

CASE OF CHARLES JEWETT, M.D., OF NORWICH TOWN.

Reported by A. Peck, M.D., of Norwich Town, Conn.

Dr. Jewett, aged 71—American—lecturer—family history good.

Has always been a healthy man until six years ago, at which time he was lecturing in Vermont; he then had a sudden attack of some kind (?) of heart trouble, since which time his heart has caused him more or less uneasiness. The directions of Dr. Bowditch to live a quiet life were unheeded.

During the attack, six years ago, he got into a cold bed, which seemed to chill the surface, driving the blood to the center and causing embarrassment to the heart; pain of the heart was such that he was unable to

call for help; he has had three attacks since; from that time to the present the heart has been irregular in action.

Present illness began eight weeks ago, with severe angina, which lasted eight hours. At first, the pain, which was intense, was diffused over the whole chest; soon it centered over the praecordium, and became an indescribable agony. During first four hours of attack, rapidity of pulse was such that he was unable to count it, but rapidity gradually became less; improvement soon began, and progressed so that in four days he started for home, 250 miles distant, and reached there in safety. His physician had advised him to use digitalis.

When I first saw him he was comfortable, but weak; he had a spasmodic cough, for which I could not account, but for which I gave him pot. bromid, without benefit. Examination of heart showed it to be greatly enlarged, apex being to left of nipple. The valvular sounds were weak; no murmurs heard. Patient was put upon digitalis, M. x. t. i. d.; after taking this for a few days he showed alarming cerebral symptoms, when the digitalis was discontinued. With the abatement of cerebral symptoms digitalis was re-administered, M. v. t. i. d.; the pulse was not changed by this treatment in the least; it had been at about 100 per minute since beginning of illness. Cough gradually grew worse, and about ten days ago he began to raise bloody sputa; at times the sputa were dark and hard; at other times, bright, florid, and frothy. At no time has there been any fever, and nothing has been found in lungs but a few rales at base of left lung, with slight dullness. During last four or five weeks there has been some œdema of legs; none of face. Urine acid, 1022; natural color; no albumen; no casts. For last three weeks has been unable to lie down for a moment (and so he continued till the moment of death). Considering these facts: the spasmodic cough (at *first* there were no sputa), the inability to lie down, and the fact that the loudest valvular sounds were heard at right edge of sternum, about fourth intercostal space, it was thought that there might be an aortic aneurism.

Dr. Smith of Springfield saw patient on February 3d; he expressed the opinion that fatty degeneration of the heart would account for the symptoms; he advised a continued free use of stimulants, and infusion of digitalis, ℥ ss. q. 4. t.; this course was pursued, and the next day the pulse had dropped from 120 to 110.

Feb. 7, A. M. Digitalis continued until to-day. This morning muscles of body and arms twitched; there was vomiting of mucus and bile; everything before the eyes appeared like "masses of jelly, all in a tremble." Pulse 94, irregular as to rhythm and force, and occasionally intermittent. Ord. digitalis stopped and stimulants continued. 8 P. M.; pulse 110, weak, irregular; ord. whiskey, ℥ i. q. 1. t.

Feb. 8. Slept fairly; pulse 73 and better in character; ord. stimulants continued.

Feb. 9. Pulse 100, regular. Indistinctness of objects remains.

Feb. 10. Some vomiting of mucus and bile. Stimulants continued, with anodynes at night.

Feb. 14. Passed poor night; was quite delirious; had an attack of angina; gave three or four drops of nitrite of amyl to inhale, which gave almost perfect relief in about one minute; all symptoms of digitalis poisoning vanished; ord. to diminish anodynes so far as possible, and to give ʒi. infusion digitalis, q. 4. t.; pulse 108.

Feb. 15. Another poor night, with the worst attack of angina he had experienced thus far; his son gave him amyl nitrite, which relieved him as before.

Feb. 19. Not much change since last note. Amyl relieves the angina, and if given with the premonitory symptoms prevents the attacks. As glimmering before the eyes returned the digitalis was ordered, q. 6. t. instead of q. 4. t.

Appetite and bowels good, as they have been during the whole course of the disease. Expectoration continues; sometimes it is bloody and in hard masses; at other times soft, frothy, and nearly free from blood; says it seems to him as if the sputa came from the base of the lungs. No sleep without opiates.

March 3. Patient very restless; distress not relieved by amyl nitrite. Ord. whiskey, ℥ss. q. 3. t. (During the whole course of the disease stimulants agreed with the patient, and sometimes gave almost as marked relief as did the amyl at first; but he had an unconquerable antipathy to liquors, which always led him to cut down the amount ordered.)

March 11. Exceedingly restless and irritable. Stomach also irritable; vomits food and medicines; pulse 120; neither stimulants or amyl give any relief; distress greater than ever before. Complains greatly of wind in the stomach.

April 1. Since last note patient has failed constantly. Pulse 120, feeble and irregular. His respiration when asleep is peculiar; he will breathe 25 or 30 times, each breath being rapid and deep; then all respiration ceases for from 30 to 60 seconds;* so he continues until he awakes. Mouth is very dry; can swallow nothing but a little water. His whole body is jaundiced.

For last ten days there has been considerable œdema of the limbs. Is delirious most of the time.

April 3d. Patient died this morning; has not been able to swallow for last two days, nor to recognize any one for more than an instant. Was unable to lie down to the very last.

AUTOPSY.

Autopsy eight hours after death. Body emaciated, and jaundiced: marked œdema of legs.

Lungs.—On opening the chest, some pleuritic adhesions were found;

* Cheyne-Stokes—respiration.

on the anterior surface of left lung was a recent adhesion; some lymph, and a little pus, no serum. In the lower lobes of both lungs were large solid masses, evidently the result of pulmonary apoplexies; such a mass was also found in the lower portion of upper lobe of left lung; these portions were solid, like liver; and on section black blood oozed from the cut surfaces.

Heart.—The heart was greatly enlarged; (there were no scales for weighing it). No pericardial adhesions; no valvular lesions. There was a slight excess of bile-stained serum. The apex bulged greatly; it was darker than the rest of the organ; the vessels on the surface of apex were enlarged and intensely congested; to the touch it was hard and resisting. On section, a mass of fibrin, size of a hen's egg, was found in the apex, (left ventricle) clinging tightly to the heart-walls; it was not a *recent* clot; but was light colored, resisting, and somewhat laminated. Some portions of the left ventricular walls were three-quarters of an inch in thickness; but in the thinnest portions over the clot not more than one-eighth of an inch. The case was pronounced to be one of aneurism of the heart.

Liver.—The liver appeared to be fatty; was small for so large a man. There was hardly any left lobe; the upper portion of the right lobe bulged directly upwards, forming a tuberosity as large as a small fist; section revealed nothing peculiar. No anatomical cause observed to account for the jaundice.

For constant assistance in the treatment of the case I am indebted to Dr. E. C. Kinney of Norwich.

TYPHLITIS, AND PERI-TYPHLITIS OR DISEASE OF THE CÆCUM, AND VERMIFORM APPENDIX, RESULTING IN INFLAMMATION AND ABSCESS IN THE RIGHT ILIAC FOSSA.

E. C. Kenney, M.D., Norwich.

This disease has been described by various writers as typhlitis, tuphloenteritis, peri-typhlitis, cæcitis, lumbar abscess, fecal abscess of iliac fossa, etc.

The literature of the disease as given in the medical text-books is quite limited, but scattered through the periodicals of the past thirty years, especially those of the last fifteen, are many very interesting records of cases, with treatment. Among those of particular notice, I would refer to the celebrated article of Dr. Willard Parker, published in the New York *Medical Record*, March, 1867; that of Dr. Gurdon Buck, in the same, January, 1876; that of Dr. Leonard Weber, in the same, vol. 13, p. 39, with remarks by Dr. Sands; also Dr. Weber's article in the New York *Medical Journal*, August, 1871; the very valuable paper of Dr. Bartholow of Cincinnati, in Hays' *American Journal*, 1866, p. 351; the ac-

count of the disease in Copeland's Dictionary of Practical Medicine; the able article in Ziemssen's Cyclopædia, by Bauer, in which reference is made to some eighty-seven different papers, ten of which are by American authors, about half-a-dozen by English, and the rest principally by German and French. The peculiar anatomy of the cæcum and appendix, which probably strongly predisposes to the retention of fecal matter and foreign substances, is worthy of notice.

Gray says of the cæcum, "It is the large, blind pouch in which the large intestine commences. It is the most dilated part of the tube, measuring about two and a-half inches both in its vertical and transverse diameter. It is situated in the right iliac fossa, immediately behind the anterior abdominal walls, being retained in its place by the peritoneum, which passes over its anterior surface and sides,—its posterior surface being connected by loose areola tissue with the iliac fascia.

Occasionally it is almost completely surrounded by peritoneum, which forms a distinct fold,—the meto-cæcum connecting its back part with the iliac fossa. When this fold exists, the cæcum obtains considerable freedom of movement. Attached to its lower and back part is the appendix vermiformis, a long, narrow, worm-shaped tube, the rudiment of the lengthened cæcum, found in all the mammalia, except the highest forms, as the ourang-outang and wombat. The appendix varies from three to six inches in length, its average diameter being about equal to that of a goose-quill. It is usually directed upwards and inwards behind the cæcum, coiled upon itself, and terminating in a blind point, being retained in its position by a fold of peritoneum, which at times forms a mesentery for it. Its canal is small, and communicates with the cæcum by an orifice, which is sometimes guarded by an incomplete valve. Its coats are thick, and its mucous lining furnished with a large number of solitary glands. The appendix not unfrequently occupies abnormal positions. In the cæcum the longitudinal fibers are arranged in three bundles, much shorter than the mucous membrane lining the same. This arrangement permits a great increase in size when distended by fæcal accumulation. When not so distended, the mucous membrane lies in folds and sacs which form a most convenient place for the lodgment of foreign substances. From its attachment the motions of the cæcum are quite limited; consequently foreign bodies lodged in its folds are less easily detached than in other parts of the intestines.

The pathological conditions we are considering may commence either in the appendix (by far its most frequent site), in the cæcum, or more rarely in the sub-cæcal connective tissue. In the cæcum and appendix some irritating substance, most often hardened fæcal matter, or some foreign article, as seeds of fruits, particles of bone, shot, pins, etc., become lodged. These from their pressure cause inflammation of the mucous membrane. The inflammation extends to the other coats, and ultimately to ulceration and perforation. As a rule, before perforation is accomplished circumscribed peritonitis takes place, adhesive lymph

is poured out and attachments are formed with the neighboring parts, thus, for a time at least, inclosing the pus and perforating article in a sac, and shutting them off from the abdominal cavity. In this way an abscess may form and grow to the size of a man's fist, and even larger. Having formed, its contents may be absorbed, leading to a firm union of its walls, in which the offending substance is imbedded, or ulceration may destroy the wall of the abscess, leading to perforation, either into the abdominal cavity, into the intestines, or externally. Cases have been recorded in which the pus took very strange routes, having discharged itself into the bladder, vagina, uterus, vena cava, lighting up secondary abscesses in the kidney, liver, lungs, or even opening into the thoracic cavity. Again, it has filtered between the layers of the abdominal walls, leading to immense abscesses and sloughing of the parts. As a primary disease, inflammation commencing in the sub-cæcal connective tissue must be rare. It is probably owing in most cases to some traumatic cause, or perhaps to pressure of a much-distended cæcum. As a secondary affection—perityphlitis—its pressure is very constant. These inflammations show a marked predisposition to attack the male sex in preference to the female, in the proportion of about five to one. Volez says, thirty-seven females to nine males. Bamberger, as twenty to four; and others in about the same proportion. Also they appear to be diseases of the earlier half of life, the very great majority of recorded cases occurring under forty years of age.

The causes of these conditions are often very obscure; those agencies that interfere with the normal physiological action of the intestine probably in many instances afford a starting-point for the trouble. Thus in constipation with great distention of the cæcum, its muscular coat may be partially paralyzed, a portion of the fæcal contents becomes entangled in its folds, the fluid parts are absorbed, the solid portion (the phosphates and carbonates) remains, and an intestinal calculus results. This result is much favored by the peculiar movements of the contents of the cæcum, which all physiological anatomists tell us are propelled against gravity, backwards and upwards.

These calculi may remain in the cæcum, or be pressed into the appendix, or they may be formed in the latter situation. Again, external injuries, catching cold, foreign substances swallowed, lesions remaining from preceding disease, as imperfectly healed ulcers of typhoid fever, dysentery, etc., tubercular and scrofulous ulceration. These diseases may occur in a very insidious manner or be ushered in with great severity. The course they run may be acute or chronic, and show every variety of symptoms. Perhaps a careful study of the forms and terminations that these inflammations present may enable us to arrive at a more correct appreciation of their pathology and indications as to treatment. No doubt there are many cases that do not advance beyond inflammation of the mucous membrane lining the appendix or cæcum. Dr. Austin Flint in his lecture says that Dr. James Jackson of Boston,

in his "Letters to a Young Physician," describes an affection under the name of "Painful tumor near the cæcum," which under appropriate treatment disappears, and confesses his inability to form an opinion as to its precise site and character. Dr. Flint says, "I will venture the conjecture that it is an inflammation of the mucous membrane lining the vermiform appendix, with dilatation." In illustration of this form permit me briefly to describe a case I had under observation a few months since.

William S., a strong, healthy boy fourteen years old, had been sick in the house several days before I saw him. He had some cathartic medicine administered by his mother, which operated freely, but growing worse instead of better I was sent for. Found him in bed; temperature 100½°; pulse 100; respiration 20; tongue furred; no appetite; some nausea; complained of severe pain in the abdomen. Upon examination discovered in the right iliac fossa a well-marked tumor, perfectly distinct in its outlines, dull and resistant upon percussion, and intolerant of the least pressure. Under treatment his symptoms improved, and in about a week he was up and around the house.

In the next form the inflammation extends to the other coats, circumscribed peritonitis is induced, adhesive lymph is poured out, and the neighboring parts are glued together; pus forms, and if perforation occurs, the offending substance with the pus is confined in the protecting cyst. In time the more fluid parts of the pus are absorbed, the walls of the sac become firm and contracted, and recovery slowly ensues. An example of the above form I think the following case exhibits:

E. A. C., twenty-eight years old, a moderately healthy man, on the morning of May 11, 1875, was seized with very severe pain in the abdomen, accompanied with incessant nausea and vomiting; temperature 103½°; pulse 120; respiration 30 and thoracic; skin dry; tongue much furred; countenance expressive of great suffering. On examination the abdomen was moderately tympanitic, and the right iliac fossa occupied by a tumor, its outlines perfectly definable, exquisitely tender to the touch, giving upon percussion a dull sound and marked sense of resistance. On the 17th of May Prof. Fordyce Barker was called in consultation, and did me the great honor to confirm the diagnosis, and to approve the treatment. After the tenth day the more acute symptoms began to subside, and the patient was convalescent in about six weeks. As long as he was under observation an irregular induration could be felt deep in the iliac fossa. At about the eleventh day there were some evidences of septic poisoning.

Instead, however, of the fortunate issue above described, the walls of the cyst may break down, the contents are discharged into the abdominal cavity, and general peritonitis occurs, quickly ending in death. A very painful case that resulted fatally in a young man of great promise was, I conceive, typical of this form.

February 3, 1876, was called to see C. H. D., a robust, healthy boy, aged nineteen years. The history was, that he had been sick for two days with pains in his bowels, and vomiting. His mother, thinking it an ordinary "bilious attack," had given him two blue pills of five grains each, and followed them with a saline, which had acted freely. The pain and fever increasing, I was sent for. I found him in bed, lying upon his

back, and complaining of great pain; temperature 104°; pulse 125; respiration frequent and shallow; tongue furred; skin hot and dry; nausea almost constant; urine scanty and high-colored. An examination revealed the abdomen tympanitic, with marked dullness in the right iliac fossa, which was occupied by a firm, resisting tumor of excessive tenderness, and affording much pain in any attempt to assume a sitting posture. During the progress of the disease I had the advantage of a number of consultations with Drs. Carleton and Perkins. The propriety of an operation was earnestly debated, but owing to the reluctance of the parents and an apparent amelioration of the symptoms, it was unfortunately deferred.

On the twentieth day he became much worse, signs of general peritonitis supervened, and he died on the 22d of February. A post mortem was permitted, and made the next day by Dr. Perkins, Dr. Carleton, and myself present. Weather intensely cold. Upon section of the abdomen most extreme peritonitis was disclosed, and the entire contents of the right iliac fossa in such a gangrenous condition that it was impossible to make any dissection of them. In fact the fossa was filled with a mass of broken-down and decomposed matter.

In the last two forms I presume the ulceration and perforation (if it proceeds as far) occurs in the posterior part of the cæcum, which, as a rule, is uncovered by the peritoneum, and the abscess is formed in the sub-cæcal connective tissue. If the ulceration is in the appendix, and it occupies its usual site behind the cæcum, the abscess would be in the same locality. Another variety of this disease not unfrequently met with, is that in which the inflammation is so intense and rigid that ulceration and perforation take place, causing death by general peritonitis, before nature has time to form the protecting cyst. Death generally occurs about the end of the first week. In illustration: I remember one afternoon, in the fall of 1859, going into Bellevue Hospital, and being told a post-mortem was about to be made by Dr. Charles Phelps on the body of one of the resident physicians, who had died that morning of perityphlitic abscess after an illness of about a week. He had been attended by Dr. Alonzo Clark, which is equivalent to saying that every resource that the science and art of medicine affords had been exhausted in his behalf. Section of the abdomen revealed general peritonitis of a high grade. The appendix was distended to twice its normal size by a number of fæcal calculi, ulceration had resulted, and several had escaped into the abdominal cavity, causing the mischief. Nature had succeeded in constructing the protecting cyst around about one-half the distance necessary to enclose the cæcum and appendix. In this instance the appendix, instead of occupying its more usual position behind the cæcum, extended downwards towards the pelvic cavity.

In the chronic course these plegmonous inflammations sometimes pursue, each individual one presents a history peculiar to itself.

To briefly recapitulate, we may have this disease first as inflammation of the mucous membrane lining the parts. Next the inflammation extending to the other coats, setting up circumscribed peritonitis, and adhesive attachments enclosing the products of the inflammation, and

ending by resolution. Next, instead of resolution occurring, a secondary ulceration of the cyst walls takes place, and an infiltration of its contents into the peritoneal cavity, causing general peritonitis. And lastly, an inflammation so intense and acute that ulceration and perforation occur before the parts become glued together, causing general peritonitis.

The most prominent symptoms of the disease are the tumor (which may or may not have been preceded by functional disorder of the intestines), the pain, the signs of peritonitis, and the constitutional disturbance. The tumor is situated in the right iliac fossa, bounded below by Poupart's ligament, above by a line drawn from one superior spinous process to the other, and extending inwards more or less to the median line. The tumor can generally be felt *quite beneath* the integments, which are movable over it, and the tumor itself immovable, firm and resisting to the touch, smooth on its surface, with its outlines well defined, and dull upon percussion. At times a gurgling can be felt. It is very tender, and sensitive to the slightest pressure. The tumor generally forms a prominence perceptible to the eye, although at times a tympanitic condition of the abdomen serves to disguise it. Weber says, "The tumor is formed of firm exuded masses around the vermiform and cæcum, or in the cellular tissue of the iliac fossa, the adhesion of the neighboring intestines, and the fluid contained in the newly-formed cavity." Pain is always present in some degree. It may be of a dull, aching nature, or very acute—being most severe when peritonitis forms a prominent feature of the case. The signs that are indicative of peritonitis and perforation present no distinctive character from those usually attendant upon peritonitis. The phenomena of fever are always present—sometimes slight, often well marked. Nausea and vomiting are generally observed, and frequently form a very distressing symptom. The vomited matter is most often the contents of the stomach, mixed with bile. Fæcal vomiting is seen in some cases, supposed to be caused by occlusion of the cæcum from pressure of the tumors. Constipation exists in the majority of cases, pyæmia and septicæmia may occur during the progress of the disease. From pressure of the tumor, when it attains a large size, upon the nerves and vessels of the lower extremity, œdema, pain, numbness and a feeling of weakness are produced.

The diagnosis in the acute forms is not difficult; the deep-seated, painful, dull, and immovable tumor in the right iliac fossa; the constitutional disturbance, and the signs of localized peritonitis are sufficiently characteristic. The pathological conditions that have been mistaken for or confounded with it are: First, Fæcal accumulations; these tumors are not painful, are somewhat movable, and are attended by no constitutional disturbance. Second, Tumors and abscesses developed in the walls of the abdomen over the site of the cæcum; these are distinguished by their superficial character and situation, and the absence of all signs of intestinal disturbance. Third, Abscess of the

psoas muscle; in this condition the tumor is very deep-seated, *not* dull upon percussion, and rendering any movement of the leg very painful, or impossible. Fourth, Tumors about the kidney; these occupy higher positions, and extend into the lumbar region, symptoms of kidney disease are present. Fifth, Intussusception of the intestines. If the tumor caused by the intussusception happens to occupy the right iliac fossa the differential diagnosis would be difficult, but the blood and mucous passed in the stools, and the occlusion of the intestines occurring early, would assist in recognizing the trouble. Sixth, Cancer of the cæcum and colon. Its history and slow development with the peculiar knobby feel of tumor will distinguish it. Seventh, In the female, pelvic peritonitis and pelvic cellulitis. These tumors are felt to extend downwards into the pelvic cavity, or a vaginal and rectal combined examination would reveal their true character. Eight, Ovarian disease might for a time complicate the diagnosis, but a vaginal examination would remove the doubt. Ninth, Abscess caused by caries of the bodies of the vertebra has been mistaken for perityphlitis. Attention as to the manner in which the trouble commences, the seat of the pain, and the symptoms peculiar to the disease, will serve for a correct diagnosis. In the majority of cases it is impossible to determine the particular anatomical site in which these inflammations have their starting point. The sudden occurrence of peritonitis without preceding intestinal disturbance would indicate the appendix.

A slowly forming tumor with sub-acute symptoms would lead us to suspect the sub-cæcal connective tissue as the starting point.

An examination through the rectum should not be omitted, particularly when the question of operation is under discussion.

Treatment. There are few diseases in which a full, clear, and intelligent comprehension of its pathology, and the indications and principles that should guide in its treatment are more imperatively demanded than in the one under consideration. First, I would establish as a cardinal rule to abstain from the administration of cathartics. I believe that, in diseases resulting in intestinal obstruction, more lives have been sent to their last, long rest by the injudicious giving of cathartics than by the diseases themselves, ten times told. It should be our endeavor to secure to the inflamed parts as entire anatomical and physiological rest as possible. This can be accomplished by the use of opium or some of its preparations, in full doses, either by the mouth, the rectum, or hypodermically; also the opium fulfills another indication by relieving the agonizing pain. Opium probably more than any agent modifies inflammation of serous membranes. This has been abundantly proven by the oft-repeated investigations of Dr. Alonzo Clark, in the treatment of peritonitis by this drug in the wards of Bellevue Hospital. Next in importance is quinine, given in moderately full doses, say from ten to fifteen grains in the morning, and from five to ten grains in the evening.

The object we seek to accomplish by the quinine is the prevention of the formation of pus. The quinine, I presume, would be assisted in

securing the desirable result by giving the sulphide of calcium in small doses of about one-tenth of a grain every hour or two. The remarkable influence that this medicine is known to possess in preventing or limiting boils, carbuncles, and abscesses, would certainly render it worthy of a trial in these cases. If the head be unpleasantly affected by the opium or quinine, an occasional dose of bromide of potass. will afford much relief. Externally it is generally recommended to paint over the surface of the tumor with tinct. iodine. This is good practice; but I think a better one is to apply a succession of small flying blisters over and around the sides of the tumor, and to keep the parts constantly covered by a large, light, soft poultice as hot as can be borne, and frequently renewed. The rectum should be kept unloaded by an injection repeated sufficiently often to secure the object. The diet should be of the most bland and unirritating character. Milk undoubtedly is the best food. If much prostration exists, strong animal broths and alcoholic stimulants should not be withheld. Many cases under a treatment as above outlined will, about the beginning of the second week, commence to show signs of improvement, as evinced by a fall of temperature, a reduction in rate of the pulse, and a diminishing of the pain and size of tumor. But again, we have the painful fact forced upon our attention that the inflammation is not lessening, but increasing; the fever continues high, the pulse inflammatory, the pain severe, chills and sweating occur, and perhaps we may detect some sense of fluctuation in the tumor. Under the circumstances it is proper to endeavor to ascertain the presence of pus. Since the introduction of the aspirator this has been rendered an easy, simple, and harmless operation. Placing the patient under an anæsthetic, the most tender and prominent point of the tumor having previously been ascertained, the needle of the aspirator should be introduced. If no pus flows, it may be partially withdrawn and inserted in different directions. The pus having been found, the needle should be left in situ to serve as a guide to the knife. Now an external incision, about two inches in length and parallel to Poupart's ligament, should be made through the integument and subjacent tissues, down to the fascia transversalis. This having been reached, a careful exploration of the condition should be made by the finger. If fluid is clearly discernible, the knife should be passed by the side of the needle directly into the abscess, making an incision about one-half an inch in length, a tent, or drainage tube introduced, and the wound dressed either antiseptically or covered with a large poultice. The after treatment consists in scrupulous cleanliness and daily syringing out the cavity of the abscess with an antiseptic solution. The practice of cutting down upon these tumors is of modern date. The first operation was done by Dr. Hancock of London, in the year 1848. It seems, however, to have been little practiced until it was revived by Dr. Willard Parker, in 1867, and afterwards modified by Dr. Gurdon Buck and others. Dr. Parker made a much larger external incision—about six inches. This was found after

healing to so weaken the walls of the abdomen as to threaten hernia, and to make the wearing of a truss neeessary. Dr. Buck then advised that the ineision be shortened to about two inehes. The time most suitable for the operation is of vital importance. Dr. Parker says not before the fifth day nor after the twelfth day. Suceessful cases are recorded in which it has been deferred to the seventeenth, eighteenth, nineteenth, and twentieth days. Dr. Henry B. Sands writes, "No rule can be laid down which will apply to all cases; but the urgency of the symptoms as indicated by the occurrence of chills or sweating, and the duration of the disease, must be taken into account." Most of his operations had been done between the twelfth and eighteenth days.

The treatment of these inflammations exhibits in a marked degree the great advances made by modern medicine. While under a former antiphlogistic plan of bleeding and drastric cathartics the large majority perished, under our system of rational therapeutics and well-timed surgieal interferenee, recovery takes plaee in a large proportion of cases.

FAIRFIELD COUNTY.

Norwalk, Conn., May 10th, 1879.

W. A. M. Wainwright, M.D., *Chairman of Committee on Matters of Professional Interest in the State:*

Dear Sir,—I have the honor to send you my annual report from Fairfield County on matters of professional interest, and enclose herewith twelve communications which I have received from members of our County Society. In answer to the first question, "Has diphtheria increased in your vicinity during the past five years?" a negative reply is given from nine observers, and an affirmative answer from three others. The second question "Has its type altered markedly during the same period?" is answered in the negative six times, while five observers think that the type has become milder during the period referred to. The third question, "Is it more or less amenable to treatment than formerly?" receives "more amenable" as a response from eight correspondents, and "about as amenable as formerly" as the experience of two others. The fourth question, "What, in your experience, has been the ratio of deaths?" is replied to as follows: First, ten per cent. of cases were fatal in the practice of two physicians; second, one-quarter of the cases attacked died, while with others, three out of eleven (seven per cent.), and one in ten, were the mortalities severally given. In answer to the fifth question, "In what percentage of cases have you been able to trace its exciting cause directly to bad sewerage or drainage?" one writes, "nearly all;" another, "all, directly or indirectly;" another, "one-half the cases;" another, "two-thirds of the cases;" another, "sixty per cent.," while five cannot find such causes in operation in any of the cases. The sixth question, "Does it begin, in your opinion, as a local or as a constitutional disease?" is answered as follows: In the opinion of eight physicians it begins as a constitutional disease, while three think it begins as a local disease, and one thinks it begins both as a local and constitutional disease. The seventh question, "In treatment do you rely mainly on local or constitutional medication?" brings forth the following: six rely on constitutional medication, five adopt both local and constitutional treatment and rely on both, while one relies mainly on local treatment. Eighth, "What do you consider to be the best topical application?" The first reply is chlorate of potash in child, and alcohol in adult; second, subsul-

phate of iron, carbolic acid, and glycerine; third, chlorate of potash and muriated tincture of iron ; fourth, muriated tincture of iron and chlorate of potash as a gargle every half hour ; fifth, muriated tincture of iron ; sixth, "solution of pepsin will dissolve the membrane ; try it;" seventh, sulphur, sulphuric acid, and tincture of chloride of iron ; eighth, rennet wine, lime spray, and saturated solution of chlorate of potash in form of spray ; ninth, "chlorate of potash ;" tenth, "steam ;" eleventh, nitrate of silver followed by chlorate of potash, myrrh, carbolic acid, and muriated tincture of iron mixed together ; twelfth, persulphate of iron ʒii to four ounces of water. One correspondent has faith in large doses of salicylic acid given internally, as in rheumatism.

The question regarding the more successful treatment of diphtheria is just now being urged persistently from many parts of this country and Europe. The Crown Prince and Princess of Germany were at Wiesbaden last April, whither they had repaired after the death of the late Prince Waldemar, their third and youngest son, who died of diphtheria, the same disease which had previously committed such deadly havoc in the family of the Grand Duke of Hesse. As a meeting of Germany's leading physicians was, at the time, in session at Berlin, the Empress of Germany, with her practical good sense, embraced the opportunity to offer an international prize for the best treatise tending to facilitate the cure of diphtheria. A hope has been expressed that American physicians will take part in the competition.

Yours very truly,

WILLIAM A. LOCKWOOD, M. D.,
Reporter.

DIPHTHERIA.

N. E. Worden, M.D., Bridgeport.

The printed circular of questions concerning diphtheria, sent out by the Committee on Matters of Professional Interest in the State, was received only yesterday. Before beginning my reply direct, I wish to say a few words which the circular suggests. If they are worth considering, I hope they may reach the committee who would be directly concerned with them. Probably no more important subject than diphtheria could claim the attention of the medical men of our State: a disease so fatal, so little amenable to any kind of treatment, so common, and whose manifold causes lurk concealed in the houses of both rich and

poor. It is a disease which is increasing among us. It is one which every physician would like to know more about, and would willingly investigate.

It is therefore very unfortunate that the committee should have chosen such a time for issuing their circular of inquiry. Had it been given to us at the beginning of the year, instead of at its close, every case could have been intelligently investigated, with direct reference to questions four, five, nine, and ten. As it is, there is nothing to depend upon but memory and the record-book. The former is not always a safe guide where so much, and in such detail, is to be recorded. Besides, what physician with fifty cases of diphtheria would have both time and practice to look over the names in his ledger, and review every case? As to the record-book, what proportion of the physicians record every case of diphtheria that they attend? What proportion keep any record-book at all? If the committee want intelligent, accurate reports, it seems to me they ought to change the time for sending out their circular. Mine was received on the 21st inst. I must send my reply on or before April 1st. That leaves me eight days in which to prepare a reply. Some will be abundantly able to do it; for others I know that the hours will be too few.

Question 1. Has diphtheria increased in your vicinity during the past five years?

From the record of deaths in the Town Clerk's office, which I have just examined with care, I am much surprised to find that this fearful disease scarcely existed among us previous to 1873. Of course the only means I have of finding the presence or the comparative prevalence of the disease is from its record of death.

Statisticians who have compiled reports carefully will know how many cases of diphtheria, on an average, every death represents. I have no such tables from which to compute.

Last year, 1878, there are recorded 399 deaths, of which 78 were from diphtheria, or one-fifth the whole number, and this is about the proportion for the last five years. Going beyond that time, we shall see a very sudden change, the causes of which are well worth study. In 1877, the deaths were 450, of which diphtheria took 75—one in six. 1876, deaths, 409; from diphtheria, 75, a proportion of one to 5.4533. 1875, deaths, 339; from diphtheria, 50, a proportion of one to 6.78. 1874, deaths, 391, from diphtheria, 72; or one in 5.43. 1873, deaths, 387; diphtheria 26, proportion one to 4.884. Of the 333 deaths in 1872, only two are ascribed to diphtheria, and of the 265 in 1871, only one. We see, then, that this disease has suddenly and enormously swelled the death rate in our city, and that this increase has been within the past five years, the list in 1874 being the highest; and that it was almost unknown in our midst, as a fatal disease at least, previous to the year 1873. There is a very interesting subject of study for our new Board of Health yet to be appointed, and it is to be regretted that the city government have so

made the ordinance that a politician is likely to be selected for the position of health officer.

2. I cannot say that the type has altered markedly. We have, as we have had, the catarrhal and the fibrinous forms, although I do not think the disease is so virulent, that it is so quickly fatal, as some years ago.

3. I do not think remedies reach it any more surely now than before. If it is not so fatal it is owing to the character of the disease, rather than to the effect of medication. I do not know of any remedy yet found which will in the least prevent the formation or spread of fibrous diphtheria.

4. I am sorry that I have kept no record of cases and of deaths, for in such a way only can this question be answered properly. I regret to say that I cannot answer this question. I do not know in my own experience what the ratio of deaths have been.

5. In none, but I am convinced that many cases arise from that cause. In a manufacturing city, it is difficult to single out any one cause absolutely.

On page 109 of the first Annual Report of the Connecticut State Board of Health, is a map of Bridgeport, with the fatal cases of diphtheria for the last two years located on it. As locating the spots was entrusted to me, I can say that during the years 1877–8 diphtheria was found throughout nearly every part of our city, in houses old, dirty, without water or sewer connections, and also in houses just built, clean and well plumbed. It is found on the very edge of tide water, and on the highest elevation of Golden Hill, seventy feet above the river.*

A few facts, however, in regard to the sewers may be worth noticing. Of the cases on the map referred to, thirty-nine were in E. Bridgeport. Previous to 1878, the city clerk informs me that the only sewer on that side of the river was a private one in the northern part, put in simply to drain the land through which it ran. Within the last year, five sewers, some of them large ones, have been put in, and these drain most of the entire eastern district. Granting that the mortality from this disease from 1873 to 1878 was from want of sewerage, and in 1878, that it was caused by digging up the ground for laying the sewers, there is still left to be explained the small mortality of 1871 and 1872, amounting to almost nothing. For the growth of the city within the past seven years has not been fast enough to make the difference.

Again, of the seventy-five cases noted in the principal or western part of the city, forty-seven of them are in the northern part. Of the four sewers there, three have been put in within the past year, and one added to. This latter has been made to discharge into the Pequonnock river, above the four bridges that cross the stream. Near this spot is a tract of level ground east of the Housatonic Railroad, on which are tenement houses for the poorer class. Here has been a home and plenty of food

* The map is here inserted.

for this fearful disease. A large proportion of the people living in the region now referred to, the northern part of the city, are of the laboring class.

I do not think the circular would justify me in elaborating further, as it simply asks for answers to questions.

6. It begins, in my opinion, as a constitutional disease. In answering thus, I forget all theories, and speak from observation alone.

7. Regarding the disease as constitutional, I rely mainly on constitutional medication, not knowing any local remedy which will cure or

prevent the disease. I hope sometimes to keep up strength and life by constitutional remedies, until convalescence may occur.

8. Steam.

9. It may, but not, it seems to me, so that such a rule can be laid down. I have seen presumable transmissions less malignant than the contrary, and I think that by far the greater number of cases observed have been less rather than more malignant.

10. I can not say; I do not know. I never have observed any such.

DIPHTHERIA.

F. Powers, Westport.

According to my experience, this much dreaded disease has decreased in this vicinity during the past three years. It has also become somewhat less malignant, consequently treatment is now followed by better results than formerly. Of all my cases of *genuine* diphtheria during the past five years, about ten per cent. were fatal. A very great majority, perhaps seven-eighths, of the fatal cases were children of poor people living under bad hygienic influences. About two-thirds of the whole number of cases occurred in marshy districts without drainage, or where from other causes there was accumulated filth.

In opposition to the views of Oertel, I believe diphtheria is a constitutional disease from the beginning, as much so as scarlet fever or measles. The headache, pains in the limbs, slight chills, etc., are symptoms common to the invasion of this and other acute diseases. The febrile movement of diphtheria begins quite early, often hours before the appearance of pseudo-membrane, the temperature sometimes reaching 103° Fah. while the local manifestations are yet exceedingly slight. As a rule, soon after the throat symptoms acquire prominence the fever begins to subside.

In the present state of therapeutical science we have no specific for diphtheria. Indeed it is extremely doubtful that the seemingly brilliant results reported by some physicians were due in any great measure to the particular things employed. However, I do not hold the extreme views of some very eminent men in the profession who say, "'Tis utterly useless to treat diphtheria." Local and constitutional measures are about equal in importance. The former for the purpose of moderating the inflammation, cleansing the parts most involved, and preventing the absorption of septic material; the latter supportive. On theoretical grounds renuet wine (introduced by Dr. Thomas) ought to be the best topical application, as it not only very rapidly dissolves the diphtheritic membrane, but also possesses antiseptic properties. I have had no experience with it. I think favorably of the free use of lime water. It should be employed in the form of a spray five minutes in every hour

during the day, and for the same length of time in every two to four hours through the night. Chlorate of potassa will often prove of service, not from any action on the diphtheritic exudation, but in moderating the inflammation of the surrounding parts. I prefer a saturated solution, to be used in the same manner and frequency as the lime water.

It is hardly necessary for me to observe that care should be exercised in the *internal* administration of this salt. I also quite often employ a mixture containing one drachm of perchloride of iron, seven drachms of glycerine, and five to ten grains of carbolic acid; this should be applied to the false membranes every four or six hours. Should the exudation extend to the larynx and trachea, a thorough trial of the steam atomizer with a lime water spray would be proper. In certain rare cases an emetic may be indicated. I speak of it in connection with the local treatment, and would mention the muriate of apomorphia by subcutaneous injection as probably the most certain and reliable. As to tracheotomy in diphtheria, I have not yet met with a case where I considered the operation justifiable, though I have seen a diphtheritic exudation in the larynx entirely removed and the patient finally die by way of asthenia.

The constitutional treatment should be supportive from the start, and this pertains more to nourishment than to drugs. Milk and lime water and beef tea should be given at regular intervals and persisted in. As a *rule*, large doses of quinine are not of benefit; tonic doses, or what is better, Huxham tr. and a little iron may be given throughout the disease. When the fever is prolonged beyond the third or fourth day, as is rather often the case in malarious districts, the free use of quinine is of decided benefit. Digitalis and alcohol are medicines which naturally suggest themselves here because of the rank they hold among the supports. Rightly timed, their use may be productive of good results. I have not unbounded faith in the virtues of either—much less in the internal administration of salycilic acid or sulph. carbolate of sodium. The treatment with large doses of calomel *seems* altogether irratioual.

To questions nine and ten, my answer is no.

Dr. Reid, Trumbull. From January 21, 1878, my first patient, to November 28, 1878, my last call to my last patient, I had eleven cases of diphtheria. Out of these there were three deaths, but one of these went from my care into the hands of a woman nurse in Bridgeport.

My first cases were traced to bad water and surroundings. These five cases were in one family, a Mr. B. His wife and four children had diphtheria. Two of his children died with it. Their drinking water came from a well near the barn and distillery. Right above the distillery was a cemetery. Between the barn and the house, and all around the house, the ground was marshy. They also had water in the cellar. No wouder they had diphtheria. The baby was taken to its grandparents

while its mother was sick. From this child I had five more cases of diphtheria, with one death. Last November I had my last case of diphtheria, in a colored family. They moved into a part of a shanty, where two children had recently died of diphtheria. The land here was marshy, and the house not in the best hygienic condition. About one-half of my cases the exciting cause was directly bad drainage, and indirectly of all my cases.

I believe it begins as a local disease, but soon affects the whole constitution.

I rely mainly on constitutional medication, yet use the local.

I should say the liq. ferri subsulphatis, acid carbolic, and glycerinæ, if I use any. I depend more on the antiseptic gargles, used as a gargle or with the atomizer. This, and steaming the throat, are better than any local applications with the camel's hair brush.

Dr. Wakeman, Redding. Diphtheria has not increased, but rather decreased in our vicinity during the past five years. Nor (Question 2) has its type altered markedly during the same period. I have seen only one case of a malignant character during the past winter, and this was contracted by harboring a sick tramp from Bridgeport alms-house. The patient made a good recovery, but with a partial loss of voice from ulceration of throat and vocal organs.

Question 3. "Is it more or less amenable to treatment than formerly?"

I know that more recover than formerly, probably from a better knowledge of the disease and a more rational treatment. I hardly think of losing a case of diphtheria now in families where we find the comforts and conveniences of life, and the advantages of good nursing. About all of the cases that have proved fatal on my hands, during the last five years, have been in families where filth is the rule and cleanliness the exception. Most of the cases we once considered invariably fatal, where the false membrane extends into the air passages, becoming as we call croupy, now yield to treatment. I have cured a number of desperate cases of this character that appeared to be almost in the last stages of suffocation. My treatment has been, along with the ordinary constitutional remedies, inhalation of strong vapor of iodine. I have seen little patients tossing and gasping for breath in the suffocating paroxisms, eagerly grasp the warm sponge containing the iodine vapor and carry it quickly to the nose or mouth, appearing to obtain the greatest relief from its use. My theory is that the strong iodine vapor, coming in direct contact with the diseased part, destroys the fungi and arrests the growth of false diphtheritic membrane.

Question 4. My experience of the ratio of deaths in our vicinity has been about one in ten.

Question 5. I cannot answer, as my practice is mostly in the country.

Question 6. I think that it begins both as a local and constitutional disease, and my treatment is both local and constitutional.

In the use of topical applications, I consider sulphur, sulphuric acid, and tinct. mur. ferri the best by far.

Question 9. I think the virus of diphtheria becomes *more* malignant by transmission through one human organism.

I do *not* think it is developed by successive transmission of non-specific sore throat.

Dr. Wile, Sandy Hook. 1. Diphtheria has not increased in the town of Newtown in the last five years, nor do I see any marked difference in its type as compared with those formerly seen. 2. If anything, I think the symptoms are a little more intensified rather than otherwise. This town has been remarkably free from the disease—we have not had a single epidemic during the past five years, and I do not think, from what I can learn from the other physician, that there are more than six cases a year, and the number of deaths from this cause will not average one a year. I do not notice any difference in reference to the treatment. I think the disease is quite as amenable to treatment as formerly. In my opinion the disease commences as a constitutional disease, while the local throat trouble is nothing more than a symptom of said disease. This has been forced upon me by clinical results obtained at the bedside. I remember several distinct cases the details of which I might give, which demonstrated to me the fact that the disease was due to a poison which pervades every part and organ of the body, which baffled all efforts at local treatment, and showed signs of improvement when the treatment was changed to meet the constitutional manifestations.

I rely on both local and constitutional treatment, but *mostly* on the latter. 8. I consider a solution of two drachms of the liq. persulphate of iron to four ounces of water, frequently and thoroughly applied, to be the best local application that can be used, and constitutionally I use large doses of salicylic acid, as large as we use in rheumatism, as frequently repeated and as long continued, until you see the fances begin to clear off, which will begin in about twenty-four hours. I only combine with this stimulants freely. 9 and 10. My experience has not been great enough to enable me to form an opinion that would be of any value.

ASTRINGENTS IN CHRONIC CONJUNCTIVITIS.

By Dr. F. M. Wilson, Bridgeport.

The treatment of a chronically inflamed conjunctiva is often tedious both to physician and patient. A prominent part of this treatment usually consists in the use of some one of the many local applications. With the design of ascertaining what applications were most preferred, circulars were sent to members of the State Medical Society and of the American Ophthalmological Society, and about half a dozen medical friends not members of either. One hundred and two opinions have been received from general practitioners and forty-one from specialists.

Twenty-two different drugs were mentioned. The following tables contain the more important ones, and the members who claim for each first rank:

1. *General Practitioners.*

Argenti Nitras,	38.
Zinci Sulphas,	32.
Cupri Sulphas,	15.
Plumbi Acetas,	5.
Alumen,	3.
Other drugs,	9.
	102.

2. *Specialists.*

Argenti Nitras,	18.
Cupri Sulphas,	10.
Alumen,	4.
Zinci Sulphas,	2.
Other drugs,	4.
Uncertain,	3.
	41.

As will be readily seen, there is a preference for argenti nitras, both on the part of general practitioners and also of specialists. Table 2d is especially significant, representing as it does the treatment of many thousands of cases. The most noticeable difference betwen the two is the greater number of general practitioners who prefer zinci sulphas.

The inquiry also brought ont an important difference in mode of application.

A majority of general practitioners depend chiefly upon collyria, which they rely upon the patient to drop into the eye.

Specialists, as a rule, place their chief dependence upon stronger applications, which they never trust out of their own hands.

ADDITIONAL EVIDENCE CONCERNING PARTICULAR DRUGS.

Argenti Nitras.—Eight specialists consider it "unquestionably superior to any other astringent."

Dr. Green of St. Louis goes farther; he says, "Can do all with arg. nit. that I can do with *all* the others."

Dr. Webster of New York thus excellently summarizes a method of its use: "I more often use a ten-grain solution of arg. nit. than any other astringent. I apply it by a small mop of absorbent cotton twisted about the end of a dentist's cotton-holder or a slender piece of wood. In mild cases I apply the solution to a very small area of conjunctiva of upper lid, usually a little at the inner and a little at the outer end, where the redness is greatest. In severer cases I apply it to a still larger area, and

in trachoma I apply it very thoroughly over the whole coujunctiva of upper and sometimes of lower lid. In all cases I neutralize with salt water before restoring lids to place."

Advantages.—1. Can produce with it any effect from the mildest astringent to the most powerful caustic. 2. Above tables show a greater percentage of success with it than with any other application. 3. It is painless except in strong solutions, or "mitigated stick," and even theu can be rendered so by immediate neutralization with salt water.

Disadvantages.—1. It stains everything, even the coujunctiva sometimes, when used for a long time. 2. If injudiciously used it seems to do more harm than any other applications. 3. After long use scars of the conjunctiva are more apt to follow than after the use of other applications.

Cupri Sulphas.—Four specialists consider it "unquestionably superior to any other astringent."

Used in solution, but oftenest in solid crystal.

Very smooth and lightly applied to everted lids, as seen by table, ranks next to arg. nit. among specialists, and even among the advocates of the latter is sometimes chosen where conjunctiva is thin and special liability to scars seems to exist. It is very convenient, and always ready for use. Its application is quite painful.

Alumen.—Used in crystal and in solution, 3i. to water oi.—suitable only for mild cases; crystal causes sharp pain, but for few moments only.

Zinci Sulphas.—Used only in solution, grs. i.–v. to water ℥i A great favorite as a collyrium, both among general practitioners and also with specialists so far as they use collyria.

Hydrargyri Oxidum Flavum (grs. ii. to vaseline 3i.) is preferred by Dr. Seely of Cincinnati in trachoma, and in "all cases of chronic conjunctivitis" by Dr. Murdoch of Baltimore.

Formula—℞ Zinci Sulphatis,
Cupri "
Ferri "
Aluminis, āā 3i.

Dr. Holmes of Chicago prefers a saturated solution of the above for severe cases, and various dilutions for the milder cases. Has used it largely and with great success. Solution is unstable.

Tannin.—Dr. W. S. Little, Philadelphia: "For chronic conjunctivitis without trachoma, tannin; for trachoma, tannin and copper. Along with tannin I generally insufflate calomel. Tannin and calomel are the principal articles which I use at the clinic and in private practice."

In addition to these eight favorite methods of treatment, fourteen other methods were mentioned with more or less favor.

Truly, here is not lack of material, and to sift that already on hand would be as profitable a task, perhaps, as to add to it.

In looking over the above evidence one conclusion is inevitably forced

upon a candid mind, viz.. that there is no specific for chronic conjunctivitis.

Of course every observant man must by long practice acquire increased facility in the use of local applications, and must of necessity receive many impressions as to special indications, but no one as yet has placed them in such a form that any considerable number of specialists accept and act upon them.

Quite often, then, in commencing the use of local applications, but two courses are open:

1. Pure empiricism.

2. To have some favorite which on the whole seems to meet the largest number of cases.

Finally. The principal conclusion of the above inquiry is, that argenti nitras will meet a larger proportion of cases than any other local application.*

I return my sincere thanks to the gentlemen who have kindly furnished the basis of the above report. Many of the answers received are the summing up of twenty years experience and over in special practice, and as such deserve publication in full. The necessity of brevity, however, will not permit.

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* All the local applications mentioned are not astringents; all are irritants, and some have caustic properties, but their practical value has been sought rather than their classification. The removal of any active cause for the conjunctivitis, *e. g.*, poor general condition, errors of refraction, strictures of lachrymal passages, etc., must of course precede any local application from which success is expected.

WINDHAM COUNTY.

To the Chairman of the Committee on Matters of Professional Interest:

Dear Sir,—The circular sent out by the Committee has met with response from several of the profession in this county, though not eliciting replies from the majority. The failure of some to respond is perhaps to be attributed rather to lack of information to communicate than indifference to the call. Diphtheria throughout the northern portion of the county has been comparatively unknown in the last few years, and only in the southern and southwestern sections has it prevailed to any considerable extent: while in these localities also, except in few instances, its type seems to have been less malignant than in previous years. In my own region of practice, and in towns contiguous, there has been almost perfect exemption—a region in former years visited by the disease in epidemic form, and of highly malignant type. Thus it results that we have been able to acquire little experimental knowledge bearing upon the more important questions of the circular. My own observation leads to the conclusion that the early and more appropriate treatment now adopted secures better results than formerly. That having generally come to regard the disease as specially of constitutional character with local determination, though while not discarding local treatment, we do not give to it that prominence as formerly, but we attach greater importance to constitutional and general treatment. In most of the replies from the profession of this county great uniformity is noticeable as to treatment, indicating a general conviction, the result of experience, both as to the pathology and therapeutics of this disease.

Dr. Huntington, Windham. Diphtheria has increased very much, but has become less malignant and more amenable to treatment. The ratio of deaths in 1877–78 was about ten per cent., and about fifty per cent. traceable to bad sewerage and drainage. In the majority of cases, local symptoms were first observed. I use local and general medication—for topical application liq. ferri sub. sulphatis. I have not observed increased malignancy from transmission, and think it never developed by successive transmission of non-specific sore throat.

It is very evident that diphtheria has a specific cause, as much as measles, small-pox, or yellow fever, and that it is a new disease in this part of the country. From 1849 to 1872 I did not meet with half a dozen cases, and now it is everywhere. It is not dependent upon defective

sewerage and drainage, for these we have always had. If most prevalent in filthy localities, may it not be that such places furnish the proper nidus for its specific cause, whatever that may be? It is propagated and extended more in consequence of contagious character than by general infection. Every affected person ought to be strictly isolated.

Dr. Williams, Pomfret. I have had a few bad cases, but do not recall a fatal case for years. I have seen as good results from saturated solution of quinine in tinct. ferri chloridi, applied with camel's hair brush, as any other. My reliance has been quinine *freely*, have used in severe cases 3i per day, in one case 3iss.

Dr. Robinson, Killingly. During the past winter I have treated more than the usual number of cases. The type has not changed materially, nor is it less amenable to treatment. I have not seen a fatal case in two years. I have treated about thirty cases in the past three months. Have not been able to attribute it to local cause. Single cases have occurred in isolated farm houses. Use both local and constitutional treatment. Prefer gargles of chlorine water and inhalation of steam from slacking lime. In small children, the slacking lime only. Internally, depend upon mur. tinct. iron and quinine. I think malignancy diminished by transmission.

Dr. Kent, Putnam. The disease has increased and type has not changed. It begins constitutionally. I use both local and general treatment. Prefer chlorate potassa, or chlorine solution.

Dr. Baldwin, Canterbury. I have known typhoid fever appear after several years in same house, without importation. So of diphtheria, reappearing in same house without importation. We have no right to repel a constitutional disease having local determination. We have no right to use a medicine having a specific force, when a specific disease has already possession. This rule applies to any active medicine—for instance, an active cathartic when nature is already waiting on a specific disease. "How far will nature tolerate interference?" Nature is very jealous. My quotation is merely suggestive.

I cannot better express my views, comparatively, in reference to interference with self-limited diseases, than by the limitation, shortening, or bringing to an end a healthy conception, either by local, specific, or controlling remedies. The interference is not necessarily fatal—always to a greater or less degree dangerous. The present system of sewerage in cities is calculated to perpetuate everlastingly pestilential diseases, making a place beyond wind and weather where the seeds may remain and grow, being sure, sooner or later, to exhale into dwellings, yards, and streets.

Dr. Fox, Willimantic. Diphtheria has increased, and during the past two years has assumed more of an epidemic type, and altered very much, but is more amenable to treatment than formerly, except when it exists in epidemic form. I am of opinion that two-thirds of my cases recovered. More than two-thirds of my cases have been traced to bad sewerage and

drainage. Diphtheria begins as a constitutional affection and is secondarily local.

My principal treatment is constitutional. My best topical applications are, first,

℞ Sodæ Hyposulphitis, - - -	3 iii.
Glycerinæ, - - -	3 jj.
Aqua Font., - - - - -	3 ij.

Apply freely, and am of the opinion that its special utility consists in its power of destroying vegetable parasitic productions, found by the microscope in the pseudo membraneous formation. I have also used glycerine and tannin, with good success. But I believe the distinct character of diphtheritic inflammation depends on the local effect of cryptogamic productions, and that the formation of the false membrane which is always diagnostic of the disease may be prevented if the vegetable products are destroyed.

It is *never* developed by successive transmission of *non*-specific sore throat.

L. HOLBROOK,
Reporter for Windham County.

LITCHFIELD COUNTY.

To the Chairman of the Committee on Matters of Professional Interest:

Dear Sir,—I have received more answers to the questions sent out by your committee this year than heretofore, showing, I judge, an increased interest on the part of the individual members in these matters.

To the 1st question, I have received the following answers in the negative: Drs. Beach and Deming of Litchfield, Dr. Lyman of New Preston, Dr. Thompson of Salisbury, Dr. Knight of Sharon, and Dr. Minor of Morris.

Dr. S. Goodwin of Thomaston and Dr. Bidwell of Winsted report an increase of diphtheria. I think we have somewhat more of it in Wolcottville, but it is very infrequent. Dr. Brown of Woodbury states that during the two years of his residence there he has not seen a single case, although he has seen some cases of sore throat accompanied by patches of mucous deposit upon tonsils and fauces. Dr. Stevens of Norfolk says it has been epidemic in adjoining towns, but not in that immediate vicinity. Dr. Heady of Cornwall writes that it does not appear in that section.

Dr. Derrickson of Warren writes No. "We had a very fatal epidemic in 1859, again in 1862, extending all through this region, and continued with intermissions until 1869 or '70, since which there have been a few isolated cases, but no general prevalence. This winter three families, all in the same locality, have had the disease, but it has not extended, although there has been a tendency to anginose diseases generally.

Question 2d. The following answer No: Drs. Beach and Deming of Litchfield, Lyman of New Preston, Thompson of Salisbury, and Knight of Sharon. Dr. Wood of Thomaston writes, "Yes, it is of a more severe type than formerly." Dr. Bidwell of Winsted, "No, only it is decidedly more contagious." Dr. Brown of Woodbury "considers the type of diphtheria as constant and established in its course as typhoid fever, measles, or scarlatina, classing it with the zymotic diseases." Dr. Minor of Morris says "Milder." Dr. Derrickson of Warren thinks his cases this winter have had a manifest tendency to involve the trachea and air passages; one child died with croup. Dr. Stevens of Norfolk writes that there seems to be a larger number of mild cases than formerly—possibly formerly unrecognized; again, perhaps we are

called at an earlier stage, thereby giving them active treatment earlier.

I do not discover any marked change in the disease in Wolcottville during the past six years.

To question 3d, Drs. Beach and Bidwell answer, "About the same." Drs. Deming, Lyman, Knight, Thompson, and Minor, think it is slightly so.

Dr. Goodwin writes, "This depends entirely upon its type. Severe cases are not so amenable to treatment as mild ones. This fact is the same now as formerly. Dr. Derrickson, "More amenable to treatment than in 1859."

I do not observe any great difference.

Question 4. Dr. Stevens of Norfolk cannot give the numerical ratio Dr. Derrickson, one in ten, although from 1862 to 1868 it was not over one in fifty. Dr. Brown, one in twenty-five to one in thirty. Dr. Goodwin has not lost over one in twenty. Dr. Minor, one in ten. Dr. Thompson, three per cent. Dr. Knight, twenty-five per cent. Dr. Beach, ten per cent. Dr. Bidwell, "For short periods very fatal, now rarely so." Dr. Deming, "Small, but varies in different outbreaks."

It is very small in Wolcottville; scarcely ever fatal.

To question 5, Drs. Goodwin, Lyman, Thompson, and Minor answer fifty per cent. Drs. Derrickson and Beach, ten per cent. Dr. Knight, "none." Dr. Bidwell, three-quarters or more. Dr. Deming, "occasionally." Dr. Stevens, "in none." He attributes the disease to atmospheric influences, or imprudent exposure in the absence of direct contagion, added to the improper conditions as to drainage, etc.

I think a large proportion of our cases are caused by bad sewerage or drainage.

Question 6. Drs. Goodwin, Lyman, Derrickson, Knight, Beach, Deming, Brown, and myself answer, "constitutional." Dr. Minor, "both." Dr. Thompson, fifty per cent. arise from each cause in his experience.

Dr. Bidwell, "Sometimes either, most dangerous when it begins with severe constitutional symptoms."

Dr. Stevens answers, "A zymotic disease is necessarily constitutional. It may be of any grade or type from simplex to maligna; with sometimes the local and sometimes the constitutional most marked and earliest developed."

Question 7. Drs. Knight, Beach, Deming, Brown, Goodwin, Lyman, and myself rely mainly on constitutional treatment.

Drs. Thompson and Derrickson use both, but lay particular stress on constitutional. Drs. Bidwell and Minor consider both equally necessary.

Dr. Stevens writes, "In a majority of cases local treatment is of the first importance; in mild cases, or those of moderate severity, it is the essential thing."

To question 8, Dr. Beach answers chlor. potass. gargle; Dr. Deming, turpentine, with steam from an atomizer; Dr. Goodwin, persulph. iron; Dr. Lyman, hyposulphite soda and chlorat. potassa; Dr. Bidwell, tannic and sulphuric acids; Dr. Minor, chlorat. and nitrate potassa, argent. nitratis, carbolic acid, capsicum, tannic acid; externally poultices of poke root. Dr. Stevens, "of late I favor solution of carbolic acid, tinct. fer. chloride and glycerine;" Dr. Derrickson has no faith in purely local applications internally. Astringent poultices externally, if there is much swelling, and chlorate potass., with tr. iron internally, he considered useful, acting partly as a local remedy by contact with the diseased surface during the act of deglutition. Dr. Thompson uses tr. fer. chlor. two parts, glycerine one part, applied with a camel's hair brush. Also acid carbolic (saturated solution), ten minims, liquor calcis ʒiv. to be thrown in the form of a spray; two or three grains of chlorate potassa on the tongue occasionally. Dr. Brown of Woodbury uses chlorate and bromide potass. equal parts, pulverized and allowed to dissolve on tongue at intervals of one half to three hours, in doses of three to five grains; also chlorate or bromide potass. with tr. fer. chlorid.; the latter with bromine and bromide potassa he considers almost a specific used both locally and constitutionally. Dr. Knight is "uncertain, changes frequently,"—an exeellent resumé of all the answers received.

I have never used any local application except chlorate potassa allowed to dissolve on the tongue.

Question 9. Drs. Deming, Beach, Lyman, and myself, are of the opinion that it does not. Drs. Goodwin, Derrickson, Knight, and Stevens consider that the *first* cases are the most malignant, the succeeding ones being usually milder, although the feeble and poorly nourished suffer most severely. Drs. Brown and Bidwell think it does sometimes, but not always. Drs. Minor and Thompson answer that it does in their experience. Dr. Thompson recalls some cases which bear witness to this fact, and considers the prognosis more doubtful in these cases.

Question 10. Drs. Goodwin, Knight, Derrickson, Lyman, Beach,

Deming, Brown, and Thompson answer in the negative. Dr. Minor answers that it is. Dr. Bidwell considers it quite probable, and Dr. Stevens writes, "I accept the theory that with a combination of filth, crowding, impure air and the like, a malignant disease may be developed from a simple mild form by successive transmission."

Very truly yours,

L. H. WOOD,
Reporter for Litchfield County.

TYPHOID FEVER.

W. J. BEACH, M.D., LITCHFIELD.

Case No. 1. Lizzie D., aged, 18, Irish parentage; stout healthy girl; never been sick before; out at service in the village. Was called to see her August 26, 1878; had been complaining of severe headache for eight days, but had not given up and was at the wash-tub when I was called to see her.

Aug.	26,	A.M.,	pulse	140,	temperature	103.	
"	27,	"	"	130,	"	105¾.	
"	28,	"	"	127,	"	105½.	
"	29,	"	"	133,	"	105.	
"	30,	"	"	130,	"	104.	
"	31,	"	"	142,	"	104½.	
Sept.	1,	"	"	138,	"	103.	
"	2,	"	"	136,	"	103½.	
"	3,	"	"	132,	"	105.	
"	4,	"	"	136,	"	102¼.	
"	5,	"	"	134,	"	103½.	
"	6,	"	"	143,	"	104,	Resp. 42.
"	7,	"	"	141,	"	103¼,	" 40.
"	8,	"	"	142,	"	102.	
"	9,	"	"	147,	"	103.	
"	10,	"	"	142,	"	101¼.	
"	11,	"	"	150,	"	101,	Resp. 50
"	12,	"	"	153,	"	101,	" 50.
"	13,	"	"	152,	"	100½.	
"	14,	"	"	148,	"	100¾.	
"	15,	"	"	132,	"	100.	
"	16,	"	"	138,	"	100.	
"	17,	"	"	138,	"	99¾.	
"	18,	"	"	135,	"	100.	
"	19,	not seen.					

Sept.	20,	A.M.,	pulse	120,	temperature	100¾.
"	21,	not seen.				
"	22,	A.M.,	"	130,	"	102.
"	23,	"	"	137,	"	101¾.
"	25,	"	"	140,	"	103.
"	26,	"	"	140,	"	103½.
"	27,	"	"	160,	"	102¾.
"	28,	"	"	170,	"	102.
"	29,	"	"	152,	"	100½.
"	30,	"	"	152,	"	102.
Oct.	1,	"	"	154,	"	100½.
"	2,	"	"	155,	"	102.
"	3,	"	"	144,	"	100½.
"	4,	"	"	145,	"	101.
"	5,	"	"	142,	"	99½.
"	6,	"	"	142,	"	100¾.
"	7,	"	"	140,	"	99.
"	8,	"	"	117,	"	98¼.
"	9,	"	"	126,	"	98.
"	10,	"	"	125,	"	98½.
"	11,	not seen.				
"	12,	A.M.,	"	117,	"	98½.

From 13th to 18th no record; the 18th, pulse 88, temperature normal and patient in every way convalescent. It may be noted that from Aug. 26 to Oct. 7, a period of six weeks, the pulse except in two instances was never below 130, and for a considerable part of this time was much above that. I would also state that for the first three or four weeks the patient was kept under the influence of tinct. aconite and tinct. digitalis in fair doses, so that it is fair to assume that there would have been still greater frequency of heart's action if not under the control of remedies.

The other symptoms were about as bad; for several weeks there was delirium, and involuntary and unconscious evacuation of urine, several bad sores, severe bronchitis, spells of diarrhœa, very great distention and tenderness of the abdomen, etc. With very few exceptions the patient's stomach tolerated food, medicine, and stimulants in large quantity. At one time, when there was great pain in the bowels, patient took forty-five grains of Squibb's powdered opium within twenty-four hours; patient usually took at least two quarts of milk in twenty-four hours. Patient was given about twelve grains of quinine with fair doses of sulphuric acid daily, and in addition to this was stimulated freely from the first. During the second, third, and fourth weeks of her sickness she took nearly a pint of brandy every twenty-four hours. She also had very frequent cold sponging, some days as frequently as every hour. I think the case is remarkable from the long continuance of a condition of things apparently hopeless, with final complete recovery.

MIDDLESEX COUNTY.

Answers to the questions contained in the circulars sent to the physicians of this county have been received from Drs. Burke and Cleaveland of Middletown, Hazen of Haddam, Grannis of Old Saybrook, Field of East Hampton, and Worthington of Middle Haddam.

In reply to question 1, Drs. Field and Grannis report an increase and the others less diphtheria in their respective localities than formerly.

Question 2. All reply that its type has not changed.

Question 3. Dr. Field has found it less and all the others more amenable to treatment.

Question 4. Dr. Field has found the ratio of deaths twenty per cent., and Dr. Worthington, practicing in the same town, three per cent.

Question 5. Dr. Field traces twenty per cent. of his cases to bad sewerage and drainage, and Dr. Cleaveland has traced cases to bad water supply.

Question 6. All agree that it begins as a constitutional disease.

Question 7. All rely principally on constitutional treatment.

Question 8. Drs. Cleaveland and Field use a solution of argent. nit. as a topical application, Drs. Burke, Grannis, and Hazen, tinct. ferri chlor. and solution potass. chlorat., and Dr. Worthington uses tinct. iodine diluted with solution iodide potash as a topical application with the spray of carbolic acid. Within the observation of the Reporter the disease has not increased; its type continues as for the last twelve years—mild, no deaths unless complicated with croup. It usually begins as a constitutional disease—general symptoms precede the local for about twenty-four hours. The most of the remedies I use act both locally and constitutionally. I use the tinct. chloride of iron diluted with glycerine and water, a saturated solution of chlorate of potash in lime water with an addition of glycerine, and a solution of permanganate of potash in water alternately as often as every hour, following each dose with a spray from an atomizer of five minims carbolic acid in an ounce of lime water—the last is very agreeable to the patient, and I consider it very important; it acts also as a disinfectant. I also use the above solutions to the nose with a syringe when its cavities are involved. I use quinine. I insist on good nourishment, ventilation,

and the best hygienic regulations. I give alcoholic stimulants much less freely than formerly.

R. W. MATHEWSON, M.D.
Reporter for Middlesex County.

MORTALITY OF THE INSANE.

By James Olmstead, M.D.,
First Assistant Physician Connecticut Hospital for Insane.

Some of the tables prepared in connection with the annual or biennial reports of hospitals for the insane are based upon matters of fact, *e. g.*, the age, residence, and civil condition of the patients; others are based upon matters of opinion, *e. g.*, the cause of the insanity alleged by the patient's friends, and the duration of the disease; yet others embrace both matters of fact and opinion, *e. g.*, the table of the "causes of death." When the cause of death is proved by a post-mortem examination, it may fairly be regarded as a settled fact. Otherwise it is sometimes (not always) a matter of opinion, which may or may not be correct. As long as man is fallible, so long will the most skillful diagnosticians make mistakes, and almost every experienced physician can recall instances in which a diagnosis so careful as to leave no apparent room for doubt, was blasted by the disclosures of the necropsy. Inasmuch, then, as certain arguments based on these tables might be of doubtful value, it is intended to limit ourselves to such general deductions as may safely be drawn from the premises.

With the natural desire of comparing one's self with others, Table I was several months ago collated, after a return from visiting most of the New England hospitals for the insane. The comparison herein presented has the advantage that certain influences (climatic and social), which might otherwise demand consideration, may be eliminated as practically identical in the different New England States, and the discussion is thus simplified. At the time the table was prepared reports from other hospitals covering the greater part of the year 1876 were the latest readily accessible, and these were compared with ours for the year 1876–7.

Perhaps the first fact attracting notice is the long list of diseases which have proved fatal in ten hospitals for the insane during only one year. But on looking more closely we find that symptoms as well as diseases are incorporated in the list. Thus *exhaustion* is a prominent symptom in many diseases, and is not uncommonly the mode of death, but it cannot, without qualification, be considered a cause of death. When, as is observed in Table I, out of a total of 54 deaths 21 are referred to "exhaustion," and none to any form of insanity, we may reasonably surmise that probably a majority of the 21 persons died of mania and melan-

cholia. *Ascites* too is, strictly speaking, a symptom usually traceable to visceral disease. If this, in an insane patient, cannot be ascertained during life, surely there is an imperative demand for a post-mortem examination which shall unravel the mystery. "Organic disease of the brain" is seen to cause nearly a quarter of the deaths at one hospital. But what variety of organic disease? Not general paresis, for that presents its quota separately. If, as is sometimes done, we qualify by saying "obscure" organic disease, we only deepen the obscurity of the expression, but can congratulate our brethren on having in the midst of so much obscurity a fine field for pathological study. Again, when "cancer" contributes to the mortality, would not the value of statistics be enhanced if the variety or site of the malignant disease were specified?

Flaws such as these are pointed out not with any intention of especially disparaging sister institutions, for, so far from hospital men being the chief of sinners in this matter, one doubtless need only look over the records of the Registrar's office in any of our cities or large towns to be convinced that a certain looseness of diction is far too general. Moreover, for such criticisms as are made we have the authority of no less note than Dr. Isaac Ray, who thirty years ago, in an article for the *American Journal of Insanity*, wrote, "To call exhaustion a disease, when in so far as its phenomena meet our observation it is merely a loss of muscular power incident upon a specific disease, is either to use language in a sense very different from its ordinary acceptation, or to thoroughly confound causes and effects with an utter disregard of every principle of sound pathology,"—and further, "It might be asked why in the same table some deaths are attributed to general paralysis, which is a specific form of mental disease, and not to 'disease of the brain,' which may be as properly applied to it as to mania." As a matter of professional pride we are all interested in defending a nomenclature as absolutely accurate as possible.

On the other hand, one observes in Table I the gratifying fact that the mortality from infectious diseases is very insignificant. That the particular period under consideration is not exceptional in this respect, a glance at reports for other years would abundantly prove. In the Middletown hospital, for example, no patient has ever died from typhoid fever or diphtheria; only a few from dysentery and erysipelas. This happy result is no doubt attributable, in part at least, to the attention paid to cleanliness, ventilation, and sewerage in all hospitals for the insane.

It will also be noticed in Table I that there is considerable diversity in the death-rate in the hospitals compared. From calculating the ratios between the total number of deaths and the average daily number under treatment, *i. e.*, the hospital population, it was found that the death-rate ran from 15.40 per cent. in one hospital, down to 5.82 per cent. in another. It is no more than fair to remark in passing that only in two previous years has the death-rate at Middletown been lower than the

TABLE I.

NECROLOGY OF TEN NEW ENGLAND HOSPITALS FOR THE INSANE, DURING ONE YEAR.

CAUSES OF DEATH.	Connecticut Hospital.	Hartford Retreat.	Maine Hospital.	New Hampshire Hospital.	Vermont Hospital (two years).	Massachusetts Hospitals.				Butler Hospital, Providence, R. I.	Totals
						Worcester.	Taunton.	Northampton.	Somerville.		
NERVOUS SYSTEM.											
Apoplexy,	1	1	2		3	4	18				29
Brain, organic disease,				1		3	24		5		
Epilepsy,	1		6	1	2		4	6			20
General Paresis,	4	1	9	5		9	7	3	1		39
Mania, acute,			9	3		7		4	1		27
" chronic,	1		7	12		5	11	5	1		42
" puerperal,									1		
Meningitis, acute,		1									
" cerebro-spinal,								1			
Melancholia,				1		4			2		
Paralysis,					5	8		2			
Tetanus,	1										
RESPIRATORY SYSTEM.											
Lungs, disease of,	1				1	2					
" phthisis and tuberculosis,	9	3	11		8	10	13	9	1		64
Pleurisy,	2				1						
Pneumonia,					3	6	2	1	1		13
DIGESTIVE SYSTEM.											
Ascites,			3		1			2			6
Diarrhœa,				1		1	2	1			5
Dysentery,					3	4		1			8
Gastritis,					1			1			2
Hemorrhage of bowels,						1					1
Hepatic disease,							1	1			2
Peritonitis, chronic,	1										1
CIRCULATORY SYSTEM.											
Atheroma arteriarum,	1										1
Cardiac thrombosis,	1										1
Heart, disease of,	2			1		1	1				5
OTHER CAUSES.											
Abscesses,									1		1
Bright's disease,						1					1
Cancer,	2				2		1				5
Drowning, accidental,							1				1
Diphtheria,									1		1
Erysipelas,						2	1				3
Exhaustion,					21						21
Femur, fracture of,									1		1
Inanition,						4	9				13
Senile decay,	1	2		1	1	3	2		1		10
Suicide,	1		2		1	2	1				7
Syphilis,						1					1
Ulcerated sore throat,			1								1
Marasmus,	1	1			1						3
Total,	30	9	50	26	54	77	98	37	20	12	
Average number patients,	464	133	398	260	477	500	664	474	160	145	
Ratio of death to patients,	6.69	6.76	13.07	10.00	*	15.40	10.24	7.80	12.50	8.27	

NOTE.—During the latter half of this biennial period, the average resident population at the Vermont Hospital was 479, and there were 28 deaths; ratio 5.82

above; still the mortality here has always been favorable. A similarly satisfactory statement may be made with reference to the Hartford Retreat. The total number of deaths is varied from year to year by transient, often trivial causes. Thus at Middletown last year an unusual number of old persons chanced to reach the end of their course, and sufficed to raise the percentage of deaths a little above the average. Again, the high death-rate at McLean Asylum, Somerville, may be partly explained by the fact that, for the year under consideration, out of 92 admissions 74 were recent cases — an unusually large ratio; and it is generally recognized (see Griesinger, New Sydenham edition, p. 448,) that in hospitals for recent cases the mortality is greater than in asylums proper. Dr. Thurman, in his "Statistics of Insanity," makes this remark, quoted by Dr. Mortimer Granville in "Care and Cure of the Insane," Vol. I, p. 144: "The mortality is generally more favorable during the early history of an asylum; and during the first twenty and even thirty years of its operations, as the proportion of recent cases admitted increases, and as the old cases [admitted during the first years of the asylum] die off, it usually continues to undergo a material increase, which often amounts to 50 or 100 per cent. upon the mortality of the first five years."

Table I also indicates that the major causes of death in the nine hospitals whose reports specify them were, (omitting as indefinite "exhaustion" and "organic brain disease,") phthisis and tuberculosis, chronic mania, general paresis, apoplexy, acute mania, epilepsy, pneumonia, and senility. Tuberculosis is classed with phthisis because, although acute tuberculosis is an acknowledged pathological entity, it is comparatively rare, and in these hospital cases there is every reason to believe that the morbid process was chronic; chronic tuberculosis is nowadays considered by authorities (Rindfleish and Delafield, for instance,) as a variety of phthisis. The above diseases are named in the order of fatality, and form the link connecting Table I with Table II.

TABLE II.

CAUSES OF TEN OR MORE DEATHS AT THE CONNECTICUT HOSPITAL FOR INSANE, APRIL 30, 1868—NOVEMBER 30, 1878.

CAUSES.	ADMISSIONS.		DEATHS.			Ratio to whole number of deaths
	M	F.	M.	F	Tot.	
Apoplexy,			15	1	16	5.65
Epilepsy,	49	19	7	4	11	3.88
General Paresis,	21	1	16	1	17	6.36
Mania, acute,	281	195	19	10	29	10.24
Mania, chronic,	304	285	16	7	23	8.12
Phthisis and Tuberculosis,			23	18	41	14.48
Pneumonia,			9	4	13	4.59
Senility,			16	11	27	9.57

CAUSES.	DEATHS.		
	M.	F.	Total.
Total deaths in the above period from all causes,	184	99	283
Ratio to total admissions,	19.04	13.98	16.90

In preparing this table from the entire death record of the hospital as given in Dr. Shew's last report, it was thought that the representative mortality would be best expressed by ignoring comparatively rare causes of death, and tabulating those only which had acted in ten or more instances. It was thus found that the same agents as named above had in the Middletown hospital produced a majority of the deaths, and had been active in nearly the same degree. Here is observed the well-known fact so universally true, that among the insane more men than women die within any given period, and the statement that 19 per cent. of the males admitted and 14 per cent. of the females admitted during ten years have died in the hospital, is simply in accordance with general testimony. Dr. Pliny Earle, the veteran superintendent of the Northampton hospital, in certain elaborate statistics prepared years ago, reaches the same conclusion, and, not venturing to assign any especial reason for the fact, simply regards it as a certainty that when the statistics of insanity are properly perfected "it will be demonstrated that the average duration of life is longest among women" (Seventeenth Annual Report, 1873). Without an absolute demonstration, part of the difference is commonly explained on the ground that the most invariably fatal form of insanity—general paresis—attacks males often, females hardly ever. Again, Table II shows that the unequal mortality of the sexes from epilepsy (seven males, four females) agrees nearly with the unequal admissions (forty-nine males, nineteen females). Finally, the physicians experience is in accord with the opinion of most systematic authors (see Sidell on Apoplexy, p. 32) that males are more liable than females to be attacked with apoplexy. That the inequality between the two sexes in this respect is greater among the insane than among the sane is seemingly indicated by our table, however it may be accounted for.

From Table II one would reasonably judge (1) that most of the hospital deaths are the result of chronic affections; and (2) that insanity and other diseases of the nervous system and diseases of the respiratory system kill pretty nearly all of our patients who do not die of sheer old age. That these inferences would not be far from the truth is shown in Tables III and IV. The terms "acute" and "chronic" are here used in their ordinary loose acceptation, except that, in speaking of the different forms of insanity, the former adjective has ordinarily a fixed signification—meaning that the insanity has lasted less than one year.

TABLE III.

DEATHS AT THE CONNECTICUT HOSPITAL FOR INSANE.

CAUSES.	M.	F.	Total.
From chronic affections,	101	57	158
From acute affections,	83	42	125
	184	99	283

Table IV is especially interesting since it shows that from the beginning of the hospital 104 patients have died of diseases of the mind and nervous system, 64 of diseases of the respiratory system, and 27 of senility, leaving only 88 whose death was due to other causes. Dr. Earle's 194 deaths presented in conjunction exhibit the same general relationship. Additional evidence (forcible as coming from a distance) of the extensive action of these classes of diseases is given in a footnote in Reynolds' System of Medicine, Vol. II, p. 61, in the form of a table, which is herewith presented. The statistics, of which this table forms part, cover many years at the Somerset Asylum in England. The cause of each one of these 539 deaths was established by post-mortem examination. If these selected cases represent fairly the general mortality, diseases of the respiratory system certainly produce an extreme proportion of the deaths at that institution.

TABLE IV.

DEATHS AT THE CONNECTICUT HOSPITAL FOR INSANE.

CAUSES.	Total.	Ratio to whole number of deaths.	At the Northampton Hospital.
From diseases of nervous system,	104	36.74	84
From diseases of respiratory system,	64	22.61	34
From senility,	27	9.57	4
From other diseases,	88		72
	283		194

TABLE IV, A.

Statistics of Somerset Asylum.—Dr. Boyd.

CAUSES OF DEATH.	M.	F.	Total.	Ratio to whole number of deaths.
Diseases of respiratory system,	148	104	252	46.58
Diseases of nervous system,	112	73	185	34.32
Diseases of digestive system,	18	41		
Diseases of vascular system,	11	18		
Diseases of genito-urinary system,	2	1		
Diseases of locomotory system,	1	3		
Fevers,		2		
Accidents,	3	2		
	295	244		

"The diseases of the respiratory organs which proved fatal were principally pneumonia and phthisis."

TABLE V.

Monthly mortality at Connecticut Hospital for Insane.

Years.	January.	February.	March.	April.	May.	June	July.	August.	September.	October.	November.	December.
1868						1	1	1	1	1	6	1
1869		2	1	3	1	1	3	3		2	4	
1870	1	3		2	2	1	1	1	5	1	3	2
1871		1	2	1	1			1	2		3	1
1872	3	2	1	1	3	5		2	1	1	1	4
1873		1	2	2	3	3		2	7	4	2	1
1874	5	1	5	3	3	3	2	5	2	3	1	3
1875	1	2	8	4	6	2	1	2	4	5	3	
1876	2	2	2		1	2	3	3	3	1	2	1
1877	6	3	1	3	8	1		2	1	5		5
1878	2	3	2	3	7	2	1	3	1	8	3	3
	20	20	24	22	35	21	12	25	27	31	28	21

The points which this connected series of tables was especially intended to make prominent are (1) the prevailing causes of death in New England hospitals; and (2) the influence on mortality of diseases.

mostly chronic, of the nervous and respiratory systems. "Figures," says Dr. Mortimer Granville, "may be so readily converted into fallacies that it is dangerous to generalize a hair's-breadth beyond the plain warranty of facts." To continue our subject most profitably, the next step would be to particularly study each of the predominating diseases named—phthisis, mania, paresis, apoplexy; but obviously such a course would carry us far beyond our present limits.

Before closing, however, it may be well, since statistics usually cover this point, to present a table of monthly mortality.

Table V certainly proves that no one month can be said to have invariably the heaviest mortality, for January, March, May, June, July, August, September, and November share that distinction between them. Taking the years together, however, we see that a few more have died in May than in any other month, that autumn has been the deadliest season of the year, and summer the healthiest. In some hospitals the mortality is greatest in the summer months; in others spring and winter are said (Bucknill and Tuke, p. 140) to be the most fatal periods of the year. What greater variety could one ask for? Those so disposed might surmise ad libitum on the local and sometimes accidental influences which have evolved these adverse results.

TOLLAND COUNTY.

To the Chairman of Committee on Matters of Professional Interest, etc.,

Dear Sir.—I suppose your circular, containing ten questions on the subject of diphtheria, has been received by all the members of our County Society, though only five have returned them to me, two of them accompanied by communications on some or all of your questions, the other three simply answering the questions proposed without note or comment. I will now endeavor to give a brief summary of the ideas of six of the practitioners of the county.

It should be remembered that our county has no large towns, and only two or three villages, so that opportunities for observation in diphtheria are not equal to other parts of the State.

Question 1. "Has diphtheria increased in your vicinity during the past five years?" Two physicians say it has increased, four say it has not.

Question 2. "Has its type altered markedly during that period?" One says it has, five say it has not.

Question 3. "Is it more or less amenable to treatment than formerly?" Two say yes, four say no.

Question 4. "What in your experience has been the ratio of deaths?" Average of six physicians is eight per cent. or thereabout.

Question 5. "In what percentage of cases have you been able to trace its exciting cause directly to bad sewerage or drainage?" Two are silent on this question, three say "in none," one in twenty-five per cent.

Question 6. "Does it begin in your opinion as a local or a constitutional disease?" The answers to this question are uniform, that it is a constitutional disease.

Question 7. "In treatment do you rely mainly on local or constitutional treatment?" One says local, the other five say both; should judge by the remarks that most dependence was placed upon constitutional treatment.

Question 8. "What do you consider the best topical application?" Mur. tinct. ferri, tannin, chlorate potassa are mentioned, and some other articles.

Question 9. "Does the virus of diphtheria become more malignant by transmission through one human organism?" The general impression of the gentlemen is, that it does not become more malignant.

Question 10. "Is it ever developed by the successive transmission of non-specific sore throat?" The general impression of those who have reported to me is, that diphtheria is never developed as suggested in question ten.

Perhaps the conclusion is correct that there is no material difference in diphtheria during the last five years as to its causes or treatment. Believing it to be a disease caused by blood poisoning, originating outside of the human system, it is somewhat suggestive that it should be treated mainly on general principles, to wit: use the best antidotes we can command, and support the system vigorously with tonics and stimulants.

That terrible form of the disease, diphtheritic croup, is treated more successfully than formerly by thorough and persistent steaming, with as good success, I think, as membraneous croup.

Respectfully,

S. G. RISLEY,
Reporter for Tolland County.

ESSAY.

YELLOW FEVER.

N. Mayer, M.D., Hartford.

In discussing a disease with which medical men residing in this State are likely to have little practical acquaintance, and whose ravages they have no cause to dread, my explanation and my excuse lie in the very general interest and universal sympathy aroused by the Southern pestilence of last year, and in the demonstration of the lessons which each attack of this sort furnishes for application to epidemics of every kind and nature. There is also in this disease a provocation for medical inquiry, not simply on account of the gravity of its results, but also because the very important points of the *cause*, the *method of spreading*, and the *treatment* are still mooted questions. Let me say at once that the diversity of reports regarding these and the contradictory results arrived at, spring from a diversity in the manifestations of different epidemics, whose course is apt to exhibit distinct characteristics, each different from all others. Yet there is sufficient general resemblance to prove the identity of the poison, and to comprehend all the variation of symptoms.

In treating of yellow fever the most rational views of authorities before the late epidemic will find due consideration; and next, such modifications of them will be introduced as are the fruits of last year's observations, as far as they have crystalized into reliable conclusions; and furthermore, such experiences of the disease as have fallen under my own observation will be brought forward.

It seems to be agreed on all hands that yellow fever arises, or is permanent, which means that it appears annually, in the West Indies, in Mexico, on the shores of South America, and on the west coast of Africa. As far as the United States is concerned, impor-

tation from the West Indies is usually thought to introduce the disease. Until lately the opinion has been prevalent that thus it must be imported, and that there can be no other method of origin. And even many went to the extent of looking upon importation as the sole and only means necessary to bring about an epidemic of yellow fever. Others, however, recognize that a season of continued heat and certain conditions of the soil and a predisposition of the atmosphere, if it may be so called, are also necessary conditions. The matter of filth and the neglect of sanitary precautions, though alluded to by all writers on the subject, was not insisted on as one of the principal conditions in encouraging the spread of the disease. While the epidemic of last year proved the correctness of many of these views, it did not fail to bring into prominence the important part which the want of sanitary measures plays in this relation. There is no doubt that most of the cities attacked were in a condition to justify the outbreak of almost any epidemic. In the report of the Board of Health of Louisiana, the state of New Orleans is described as so filthy that many points there asserted are almost beyond belief. Bad drainage, foul drinking water, privies supporting the rotten remnants of wooden casings and whose percolations continuously saturate the surrounding soil and subsoils for several rods, kitchen garbage used for filling streets and lots, gutters, many of which are permanently stagnant cesspools, houses, standing on ground lower than the street, having their own floor as much as two feet lower than the surrounding lot, occasional water famines, and cow-stables scattered through the city, are some of the points that make up the unsanitary character of that city. These matters are easily enumerated, but it is impossible to convey the impression which the perusal of a detailed account of this condition gives. In regard to cemeteries I will quote what one of the inspectors says about the Potter's-field in that city. He states that in this cemetery, situated between populous streets, the same graves are made to receive the bodies of many dead,—as many as six occupying a single spot. He then continues:

"I myself, making an inspection, witnessed the burial of a corpse. The grave was prepared by uncovering a coffin, opening it, raking the bones together and throwing them out, breaking up and prying out the old coffin, and depositing the new in the mould of the former. When laid in its uncertain resting place the lid of the box, like that of the one preceding, was two inches below the surface of the earth. To hide it, the earth formerly removed was piled upon the coffin in a mound

about two feet high. In this covering I counted the skulls of three former occupants, besides observing other bones innumerable. So filled with bones was the earth as to make the use of the spade extremely difficult. Another coffin lid, warped by the sun, displayed in hideous reality the body of a poor wretch, who had died a few months before. The stench was disgustingly perceptible. The whole surface of the ground was strewn with ribs and small bones, like pebbles upon the hills. Here and there huge thighbones served as head and footstones to the unknown dead.

"The citizens living in the vicinity presented a petition to the city council March 13, 1877, wherein they set forth in the strongest terms the horrible facts relative to this graveyard; how that, in summer, the stench from human bodies pervaded their homes, that, whether eating or sleeping, in doors or out, they were ever in an atmosphere heavy with exhalations from the dead. They referred to their pitiable condition during the prevalence of an epidemic, when the putrefying dead were piled in heaps under a blazing sun awaiting burial, and the overburdened earth reeked with rotting human flesh, while clouds of flies swarmed back and forth upon the graves and *upon their tables*."

And in another place, he speaks thus of the privy system:

"It is not asserting too much to declare that our privies are the most dangerous enemies of our lives and happiness. There is hardly one in New Orleans but whose contents have free access to the soil, to saturate the ground with liquid ordure. Thousands of them were originally huge boxes, or wooden tanks, but are now only common sinks, or pits in the ground, with hardly a vestige of the woodwork left. The most mischievous part of their contents soaks into the earth, and so contaminate the soil under our feet that specimens of subsoil water taken from different depths as low as ninety feet, and from different parts of the city, have been carefully analyzed by Prof. Joseph Jones, and have yielded a large percentage of urea and organic matter, the produce of animal excretions, fully fifty-three grains to every gallon. During wet weather these vaults or sinks quickly fill with water and overflow, flooding yards and gutters with ordure. Under a sun almost tropical one-half the year, this ferments, and emits a most abominable stench."

Another city situate in the country, among surroundings that should be salubrious, is Grenada.

"This town is grouped along both sides of a long sewer. This appears to be an ordinary ditch a few feet deep running from hill to river, covered in places by logs and planks with a layer of earth over them, but often entirely open. It collects the drainage of stables, cesspools, and privies—of everything. Hogs find their way into it occasionally and, being un-

able to get out, die there. The bottom of the ditch is uneven, and so deep pools of stagnant dirt form at intervals. On complaint being made to the mayor in July, a portion of this ditch was uncovered, the filth with the rotting carcasses of the hogs thrown out upon the surrounding ground, and there left under a broiling sun while repairs were carried on."

In the neighborhood of this place the first case of yellow fever occurred. Between that first case and New Orleans no closer connection can be established than that the lady who was the victim probably or possibly entered a railroad car to see a relative while the train stopped for breakfast, and that this train had come from New Orleans. No consideration seems to have been taken of the passengers who went into the station to get their breakfast and spread no infection, or of the car which went on scot-free, doing no harm elsewhere. Thus, it will be seen that in Grenada the testimony referring the origin of the fever solely to importation is neither very strong nor convincing. And, for that matter, the testimony showing its importation into New Orleans, and thereby into the country, is not so absolute as to leave an unbiased mind without doubt. While, on the other hand, the proof of unspeakable filth, and all that in the judgment of sanitarians creates or propagates disease, is very direct. On the other side, it is proper to mention that the shot-gun quarantine which a number of small towns in the interior established proved quite effectual. But it is thought that the same energy which kept the boundaries free was careful to clean up the interior, and that the shot-gun in one hand might not have proved so efficient without the broom in the other.

We have, then, in former views of yellow fever, a direct opinion as to the necessity of its importation from points where it habitually appears; and also that a hot, dry season, soil which alternates between being covered with water and exposed to the sun, general unsanitary conditions, a neighborhood to the coast, and a certain want of acclimation or an individual predisposition, are principal conditions to give it spread. To this the experiences of last year seem to have added on the one hand the conviction that the poison is carried by clothing or goods, and not by persons; that no disinfectant has proved efficient nor personal prophylaxis has been of avail except timely removal; that rigorous quarantine may prove effectual; and that neglect of sanitary measures is to be put in the foreground as an abettor of the disease. On the other

hand, last year's experiences have left with a respectable minority of medical men a doubt whether in the southern portion of this country a hot summer, special conditions of the atmosphere and soil, and filth, may not with the unacclimated produce the disease *de novo*. I have a modest personal experience to add: In September, 1864, while Acting Surgeon in charge of the United States General Hospital Foster, at Newberne, North Carolina, yellow fever made its appearance The first case attacked was the chief nurse of the officers' ward, a stout young Massachusetts soldier. The city was at that time under military law, nearly bare of civilians, filled with soldiers and negroes. The communication by vessels was with New York and Fortress Monroe. The communication with the inland was cut off by pickets. There was, I believe, no yellow fever in the country at that time, certainly not at any point accessible from Newberne. The clothing and goods with which this man came in contact were altogether United States property from the Medical Purveyor's or Quartermaster's stores. Yet he had yellow fever, black-vomit, and died in the conventional manner. His death was followed by a fearful epidemic, the character of which was as unmistakable as its results. The closest investigation made at the time by Medical Director D. W. Hand, now of St. Paul, Minnesota, and Surgeon in charge C. A. Cowgill, now of Florida, both eminently qualified and physicians of the highest standing, led to a negative result in regard to importation. An exceedingly hot, dry summer, the low state of the rivers and the exposure of their banks and of a great portion of their bed, these, with the facts that several of the barrack hospitals had been built on the site of numberless shanties whose privies and cesspools were covered with new earth now become dry and porous; then, that some wharves, for purposes of enlargement, had been filled up with stable manure, and that ordure and garbage had collected in the back-yards of almost every house not under military supervision; these were the only plausible reasons to be found for the origin of the disease. It must be remembered that the city had been a gathering place of negroes, soldiers, and refugees for a long time. In this case, unless referred to the certainly unsanitary state of the soil, nothing but an atmospheric causative condition remains to be looked to. It should also be said that the hospital was the focus from which the disease spread and the place at which it exhibited itself most severely. Another noteworthy point deserves to be mentioned in this connection. Persons who

had been at Newberne and caught the infection carried it with them to Mansfield hospital at Morehead City, distant twenty miles or more. There they were taken sick and died, or lived, but did not communicate the disease to any person who had not visited Newberne. Several convalescents from yellow fever, myself among the number, were sent to this hospital at a later period, and with them brought their baggage and clothes. No infection was spread by these. The patients at Mansfield hospital remained entirely free. The hospital itself, consisting of large, cleanly barracks, was built on a wind-swept point of pure, sandy soil, and seemed clear from unsanitary conditions except for the neighborhood of a large pier.

The Time of Infection.

The time it takes for the yellow fever infection to produce an outbreak in any certain individual seems to be three or four days. In the hospital under my charge, at the height of the disease, it became necessary to have a new detail every fourth day in order to supply the places of attendants that had taken the disease. It may, of course, develop in a much longer time, but how long has not been definitely settled.

The Yellow Fever Virus.

The nature of the poison is as yet undetermined. The hypothesis that it is carried by infinitely small vegetable or animal organisms has received strength, and some think confirmation, by observations made in 1878. Organs that are especially affected have been found crowded with these organisms, and yet the proof has not been brought that such organisms or fungi are peculiar to the yellow fever. So this question, notwithstanding the probability of the explanation furnished and the accuracy of the observations made, is one in which the deciding word has not yet been spoken.

At the same time, science has not been able to demonstrate organisms or substances which might be looked upon as the special yellow fever virus, either in the atmosphere or the water of infected localities, or in the emanations from patients. In the late epidemic medical men thought themselves justified in declaring that the special infection is spread by clothing, bedding, and goods which have been in connection with yellow fever patients, but not by the patient himself. Though there are analogies to this, such as in typhoid fever, where the patient and his fresh dejections are

considered almost harmless, while a dejection of a few hours' standing or still older date will surely spread infection, yet the distinction in yellow fever is, perhaps, too sharply drawn to be altogether relied on. Of course, the view must necessarily be that the poison is originally voided by the patient, but in a still non-infectious state. After it is located in the clothes, bedding, or other goods, it undergoes a certain fermentation, or other chemical process, which develops it into an infectious substance.

Pathological Anatomy.

The appearances revealed in an autopsy that may be deemed at all special to the yellow fever cadaver are, first of all, a more or less yellow tinge of the tissues; and, further than that, they confine themselves to the blood, the liver, the stomach, and the kidneys. The blood is found thin and dark, its red corpuscles not coherent as normally, and many of them in a state of disintegration. An increase of urea and a great diminution of fibrine are found or not found, according to the stage of the disease in which the patient died. No spores, no animal or vegetable fungi seem to have been discovered in the blood.

The liver is of a pale yellow, or light yellowish brown color, much like fatty liver, but unlike it in a retention of its normal cohesion, and even an increase of this quality. The gall bladder is generally rather empty, and the function of these two organs has evidently been suppressed. While some hold that the biliary coloring matter thus retained in the blood gives the characteristic yellow tinge, others, with more probability, suspect that in the disintegration of the red corpuscles the hæmatin may undergo a change and supply this tint. The stomach exhibits the most characteristic appearances. Congested, with erosions here and there, it carries its acutely catarrhal aspect up the œsophagus and down into the intestines. It generally contains some black-vomit, with adhesions of the coagulated grumous matter to the eroded membrane. Some attribute the pouring out of the blood into this organ to the disintegration of that fluid itself, but also to a hypothetical obstruction offered by the liver to the portal circulation, and a consequent crowding back of the blood to the stomach. The same matter is said to affect the kidneys, where this is deemed the cause of the condition simulating acute morbus Brightii which these latter organs constantly exhibit, when the patient has died in the later stages. This perplexes me somewhat, as the kidneys are not

in direct communication with the portal vessels. As far as the appearance of the kidneys itself goes they are found engorged, and the urinary tubes filled up with epithelial cells and casts. In both liver and kidneys some have found the fungus or spore above mentioned which they deem the essential organism causing yellow fever, but these views want further substantiation.

The skin, beside being yellow, exhibits, in some cases, ecchymoses of very variable size, in others it is simply yellow, from a light butter to a deep orange color.

Symptoms.

The delineations of symptoms, as presented by those who have described the different epidemics, vary considerably, and often present pictures that can hardly be recognized as modifications of the same disease. The division into classes furnished by writers possesses the same annoying variety. In giving here simply the most distinctive symptoms and groupings as I have had opportunity to observe them, the purpose of this paper may be sufficiently served and a perplexing confusion avoided.

Having felt a little uneasy or bilious, as the phrase goes, for a few days, or having felt perfectly, even remarkably well during this time, the patient awakes at night with a moderate chill, followed by moderate fever. Next morning the fever is more violent, and a severe pain gradually establishes itself in the supra orbital and lumbar regions. The eyes are remarkable. The strongly injected conjunctival vessels allow to appear between their interlaced convolutions a slight yellow tint which grows deeper and more bronzed every hour. Even the smaller vessels are injected, for a rosy wreath around the cornea is not rare. There is an appearance of dim suffusion over the whole which renders outlines indistinct, and gives a wateriness to the eye. The face is somewhat haggard, mostly pale, but sometimes deeply flushed. The appearance of the tongue is variable and never very remarkable. A slight fur, or a slight brownish coat, or a dryness in two streaks, leaving the center and the edges fair, are to be observed now and then, but can never be taken for a decisive diagnostic sign. There is first uneasiness, afterward pain of the epigastrium. The skin is found indifferently dry and hot, or covered with sweat, generally, however, the former. The pulse has a weak fullness, a yielding inflation quite peculiar to this disease, and very marked in all cases. In many, however, this does not appear before the

second day. The fever continues unabated for forty-eight or seventy-two hours, then a more or less complete remission, lasting in most cases from eighteen to twenty-four hours ensues. The patient, who previously complained of the pain in his head, back, and limbs, sits up in bed, looks better and talks cheerily, but presents no remission of epigastric pain, dimmer eyes, and an emptier pulse. Upon this follows a collapse of from four to twenty-four hours, accompanied with violent vomiting of white glairy, or greenish matter, which speedily assumes a coffee-ground appearance, and then in turn becomes the black vomit of the disease.

The above describes one class of cases, of great severity. In others, during the remission, the temperature returns to nearly the normal standard, the pains almost vanish, the stomach is easy, and hopes high. In quite a number the patient's expectation is justified, and a recovery begins with this remission.

To others again, after a few hours, perhaps even twenty-four of the remission, the fever returns with increased force. The head, however, remains clear, the pains in the back do not diminish, while those of the stomach become intense and black vomit is voided, at first with great discomfort, which, however, soon turns into apathy. The case becomes gradually worse, the scanty urine is nearly altogether suppressed and death may ensue under horrible pains and even convulsions, or it may come with coma. But in a great number of cases, before a fatal termination there is a complete disappearance of painful symptoms. Indifference and even cheerfulness precede dissolution. The vomit which comes, not with retching, but in a gush as if spouted out, is laughed at, and subjectively the patient seems improved in every way when he is actually dying.

There are, of course, many variations of this picture even in the same epidemic. We have already indicated that quite as frequently as by gradual approaches the fever springs upon its victim with the sudden chill. No premonitory sign, no apparent want of health, only the sudden chill and its sequelæ. Again, a gradual clouding of the intellect, a dulness leading to coma from which the patient never rallies, may be the method. This latter I have observed especially among nurses who have been for a long time exposed to yellow fever contact. They become sluggish, comatose, turn yellow and die on the fourth or fifth day without vomit, without pain, and without return to consciousness. In persons equally exposed and in whom the symptoms never culminated into an actual

outbreak of fever, I have noticed sluggishness of mind, complete nervous prostration, inability to think and act for months, and much gastric irritability, as the result. And this has seemed to me a minor state of that condition of which the comatose was the maximum.

Where the disease continues to the later days of the third stage, the symptoms may be such as usually attend a death from suppression of the urine. Or, again, they represent a parallel to the complete loss of strength and vital force attending the late stages of typhoid fever. Great anxiety and depression may be present in each of these stages, but frequently are entirely wanting, and merely replaced by more or less anxiety in, and resulting from, the discomfort of the first stage. The ecchymoses I have generally seen in those dying at the height of the disease, in patients without much vomit, and in the comatose cases above mentioned. In some the deep dusky yellow of the skin was completely sprinkled or dappled over, as it were, with dark red patches.

How much previous disease may modify these symptoms, how much intemperance or excesses in Baccho et Venere immediately preceding the attack may vary them; what modulations and differences individuality and the amount of poison absorbed may introduce, I will leave to every medical man to imagine. An epidemic of yellow fever in its individual manifestations upon different persons becomes naturally modified by their individual conditions. One of the broad rules is that negroes possess a much greater immunity than whites and a stronger power of resistance; that a greater number of men suffer than women; that the dainty and well appointed more easily fall victims than rough workers; and that those inured to unsanitary conditions seem less likely to be seized than others. Acclimation is one great determining cause of immunity, or of recovery when seized. The stranger is destroyed, the native and acquaintance of yellow fever is spared.

Treatment.

Among the various and manifold methods of treatment which are claimed to have been found successful in the different epidemics, there are but two that repeat themselves more or less in all, and deserve the attention of rational physicians, and these two may be typified by the words calomel and quinine. It is at times calomel alone, at others quinine alone, that bears off the palm, and again both together. My own opinions, which the literature on the subject since 1861 has not been able to modify, are embodied in the

treatment which I prescribed and officially ordered to be prescribed at the hospital at Newberne. It is this: to every patient in the first or third stage of the disease, as soon as possible, twenty (20) or thirty (30) grains of calomel, followed three hours after by two ounces of castor oil. And the rest of the treatment to be symptomatic, with this exception; no quinine on any account. The quinine had at first been tried in that epidemic in every variety of dose in which it is possible to give it, and with uniformly fatal results. Even in combination with the calomel, or following upon it, it was found to delay or imperil the case. On the other hand, the copious discharges produced by the administration of the purgatives mentioned always brought on the remission, and in many cases never to rise to an exacerbation again. Where, however, fever returned, the dose was repeated with an equally sure effect. Some physicians preferred to continue the calomel in small doses gr. i. per hour till symptoms of ptyalism appeared, whenever the attack seemed an especially severe one; and I remember a case now in this city, of exceptional severity, in which nearly one hundred and fifty grains of calomel were administered with the effect of saving one who by all symptoms seemed surely doomed. After this treatment had become fully established, if administered soon after the initiatory chill, a good issue was confidently expected. The rest of the treatment was symptomatic, as above indicated. If the patient came under treatment during a chill he was plunged into a very hot bath, the same as if he had suffered from congestive malarial difficulty. The pains in the loins were usually met by frictions, the pain in the stomach by blisters, and, small doses of nitrate of silver internally. Debility and prostration were treated in the usual way, and the convalescents were medicated and supported according to general principles. Sequelæ of the disease, that appeared in the shape of continued gastric irritability, received opium and nitrate of silver. Sleeplessness, nervous irritability, and nervous prostration called for tonics and roborants. A number of those recovered have, however, ever since been troubled by recurring attacks of these difficulties, thus proving a permanent impairment of the nervous power and of that of the stomach. I have seen cases of late in which the perpetuation of difficulties acquired in the Newberne epidemic of 1864 was to be clearly recognized, and was no donbt referable to organic lesions then brought about.

In other epidemics, however, quinine alone is reported to have proved very efficacious, more especially in New Orleans. In still

others small doses of quinine given throughout the disease, after the first thorough calomel purge, have gained laurels and undoubtedly have earned them. Occasionally preparations of arsenic are mentioned in small doses, with a happy effect upon the gastric symptoms especially. This seems likely to me, and is strongly corroborated by the reports of homeopathic physicians.

On a survey, however, of all that my own observation and my studies present to me, the conviction remains strong that an active purge, and one which specially affects the liver, is among the best means to combat the disease that we at present possess. The theory of this treatment—and I have choice of half a dozen—I do not venture to set forth: I merely present the experience, and the assurance that it has been very extensively borne out in the epidemics occuring since 1864, as well as previously in the West Indies and the South American fever ports. I have only a word to add in reference to stimulants. They are dangerous in the exacerbations of the fever—except the initiatory chill, and of doubtful effect even there. They are risky during the remissions, excellent in convalescence. And of opium the same doctrines may be accepted according to what I saw, and I am happy to announce a more general agreement by authors on this latter point than on almost any other.

Conclusions.

Finally permit me to deduce from the foregoing statements the following conclusions:

1. That yellow fever in the United States generally owes its origin and spread to importation.

2. That the yellow fever germ, whatever that may be, possesses a vitality which enables it, after years of dormancy, to become active under favorable conditions.

3. That the following may be considered favorable conditions of development: a southern climate; a season of great and protracted heat; a soil saturated with the products of animal and vegetable decomposition, which is aggravated by being alternately covered by water and exposed to the sun; more or less contact with the bilge-water and filth of ships, whether they communicate with yellow-fever ports or not; the neglect of sanitary measures; a certain state of the atmosphere that is as yet an unknown quantity to us, and which may not be demonstrable; a malarial region; and finally, the presence of unacclimated material.

4. That where those conditions exist in high potency it is possible for the yellow fever germ to develop *de novo*.

5. That if the carriers of infection meet with few or none of the above favorable conditions, the fever is not likely to spread.

6. That, consequently, prophylaxis consists as much in sanitary regulations as in strict quarantine, both together being the *conditio sine qua non* of immunity.

7. That, as the disease seems, beside its effects on the blood, to have its local manifestations in the abdominal viscera, chiefly in a disturbance of the liver and stomach and in later stages of the kidneys, active purgatives form an essential point of treatment.

From what I have said on yellow fever it is evident that unless our national and State boards of health deprive us of future opportunities, observations will yet have to be made, before any points of this subject can be considered as well settled.

ESSAY.

ALCOHOL AS A THERAPEUTIC AGENT.

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It will be the aim of this paper, first, to enumerate briefly some of the most prominent physiological effects of alcohol on the human system in health. By this means we may be able the more clearly to define the position which this important drug should take as a therapeutic agent. It will not, however, be within the scope of the present essay to discuss the subject of chronic alcoholism, or to dwell upon the extensive catalogue of tissue-degenerations which that subject introduces.

Secondly, it will be the aim to show that alcohol has in general received too much enthusiastic and over-wrought praise as a medicine, and that over-stimulation in disease, though a fashionable, is not a wise or a philosophical mode of treatment.

Finally, the question will be considered as to what conditions of disease, and in what stages, the use of alcohol is most likely to be beneficial as a therapeutic agent.

The Physiological Position of Alcohol.

Concentrated spirits of wine, or alcohol, has an irritant, corroding, and corrugating effect upon animal tissues. This local action is due to its intense affinity to water, and to its power of coagulating whatever soluble albumen the tissues may contain. When applied to mucous membranes it induces redness, heat, and an increased flow of blood to the part. These are its physical or local effects, but the more general symptoms produced by the introduction of the poison into the blood by absorption are of more importance to the present inquiry.

The common opinion that alcohol augments the gastric secre-

tions seems to have been disproved by the experiments of Claude Bernard, who demonstrated that strong alcohol diminishes the flow of gastric juice. This author was able to check completely the process of digestion in a dog's stomach, after it had commenced, by introducing alcohol. He also demonstrated the same action in the secretory glands of the intestines.

When introduced into the stomach, alcohol is quickly absorbed by the gastric veins, and passes directly into the blood. Thence it is eliminated undecomposed in considerable quantities by the lungs, the kidneys, and the skin. That portion which is not thus eliminated was supposed by Liebig to undergo a combustion in the system, being converted into carbonic acid and water. This hypothesis of Liebig has never been proven, and has been pronounced untenable by later observers. The same may also be said of the theory that aldehyde, oxalic and acetic acids are formed in the body out of alcohol. It remains certain, however, that there is a partial destruction of alcohol in the system, and that by no means do the excretory organs eliminate, undecomposed, the entire quantity ingested. Just what this decomposition is, and what new compounds may be formed by the metamorphosis, remains yet to be decided.

The use of alcohol diminishes the excretion of carbonic acid and of urea, retards the process of oxidization in the system, and interferes with the normal metamorphosis of tissues. When given in large or poisonous doses it notably decreases the temperature. The urine is increased in quantity and diminished in specific gravity. The effect upon the nerves and nerve centers is first to stimulate them marvelously. The nature and manifold phenomena of this stimulation are too familiar to require detailed description. The secondary effect of alcoholic spirits upon the nervous system is temporarily to abolish its functions. The symptoms of alcoholic poisoning are therefore similar to those of other anæsthetics and narcotics. The excitability of the muscular tissue is greatly diminished, and the muscular powers become, for the time, paralyzed. Upon the heart the effect is at first to increase its energy, and then to impair it; and upon the arteries to greatly diminish their tension or tone.

As a nutriment, alcohol must be regarded as destitute of value, since it is certain that we cannot introduce it into the system in sufficient quantities, as we do other foods, without serious disturbances of the vital processes of the animal economy. Besides this, the chemical constitution of alcohol is such as to forbid the idea of

its being transformed into the animal tissues. On the contrary, alcohol is an organic compound originating in the retrogressive process of decay, and does not bear the slightest relationship, chemically, to the albuminoid substances which constitute the pabulum of the body. It adds not a single molecule to the plasma out of which the animal organism is builded. It is not a constructor of tissue, not even of fatty tissue.

We have already seen that a certain portion of alcohol, after being received into the body, is oxydized somewhere within the organism. By this oxidization a change into lower forms of chemical combination takes place. Alcohol is not burned as food is burned, to supply heat, but it is decomposed into secondary products at the expense of the oxygen which should have been used for the more natural purpose of supplying the body with heat The decomposition of alcohol within the body must, according to a well-known law, liberate a certain amount of force. This liberation of force gives to alcohol one of its claims to favor as a valuable medicinal agent. But, on the other hand, it does not establish its claims as a nutrient, for the animal functions depend upon the transformation of the living, proximate principles of the body, and not upon the decomposition of an extraneous substance foreign to the organism.

Over-Stimulation in Disease.

Now in regard to the question of excessive stimulation in medicine, the writer of this memoir, after careful observation and experience, inclines strongly to the belief that there has been of late a marked tendency on the part of the medical profession to the indiscriminate and unwarrantable use of stimulants in disease; and that this is especially true in certain classes of acute and chronic diseases shortly to be mentioned. Moreover, he finds his views well expressed in a document which, you will remember, was signed by three hundred of the leading physicians of London, and appeared in the papers of that city in 1872. The document says, "As it is believed that the inconsiderate prescription of large quantities of alcoholic liquid by medical men, for their patients, has given rise in many instances to pernicious consequences, the undersigned, while unable to abandon the use of alcohol in the treatment of certain cases of disease, are yet of opinion that no medical practitioner should prescribe it without a sense of grave responsibility. They believe that alcohol, in whatever form, should be prescribed with as

much care as any other powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion is past. They are also of the opinion that many people immensely exaggerate the value of alcohol as an article of diet."

The reports of some of our State Medical Societies in this country will show the adoption of similar resolutions. Some of our best physicians are firmly convinced that the necessity for the employment of spirits by the faculty, in many cases, is too often imaginary and unreal.

I know that I am addressing an audience whose opinions are not all alike on this question. Yet I am confident that I give voice to the sentiments of many who hear me when I say that most of us have been formerly, and some are even now, too much addicted to the practice of giving stimulants to the sick without due caution, and of abusing an article quite invaluable when rightly used. And may I not also add that we have often been too ready to cultivate the notion that alcoholic liquors possess a food-value far beyond their real merits. Against this practice I desire earnestly, if I may do so without impropriety, to appeal to the mature judgment of every practitioner. While admitting that alcohol is a most valuable drug, and that no other remedy, such as ether or ammonia, can always with safety be substituted for it; and while acknowledging that many a poor dying mortal has been lifted up and saved, and many a valuable life prolonged by its timely aid, yet at the same time I desire to utter an earnest word of caution and of protest against what I conceive to be one of the growing errors of modern medical practice,—the too free use of spirits for the sick.

Gentlemen, I do not wish to be classed among those who believe that the medical profession generally are enormously engaged in the wholesale manufacture of drunkards out of the laity. Neither do I believe that the excuses of the intemperate that they became so through the doctors' advice are altogether honest and truthful. Yet I have no doubt but that there have been exceptional cases in which such excuses may have been urged with some show of reason. The point which I desire rather to make is, that the modern fashion of over-stimulation in many diseases is prejudicial to the immediate safety of the patient; that it protracts sickness and prevents recovery, and that it is contrary to sound physiological principles.

Contra-indications for its use.

Let us now examine a few of the pathological conditions in which alcohol may be and no doubt often is used improperly.

1. It certainly does not seem to be good practice, nor in consonance with sound physiological rules, to give alcohol at the same time as nutrients. It is well known that strong alcohol is a sure means of coagulating albuminoid substances. It also produces precipitates in gastric juice and in solutions of peptone. Furthermore, according to the best physiological authority, as we have seen, it does not increase the flow of the gastric or intestinal juices, but rather retards it. Instead of dissolving the food, it hardens and coagulates the protein compounds in the stomach. By these facts, it appears that alcohol can be no great aid to digestion, and in its stronger forms, as an appetizer, it is a most unscientific remedy in the so-called liver-complaint, biliousness, or dyspepsia for which it is often prescribed. The same disadvantage of exhibiting alcohol in the form of distilled spirits, *with nutrients* in any other condition of disease, as an aid to the digestion, is also *a priori* to be expected. This reasoning upon probabilities, and from purely physiological data, might be open to serious criticism were it not for the fact that the deductions just made have been amply confirmed by the actual experience and observation of many eminent medical men.

2. Though stimulants, in large doses, lower the temperature and produce an anti-phlogistic effect, yet I think you will agree with me that it is a mistake to give them as a febrifuge in all febrile diseases. How is it with pneumonia, for example? Shall we not be more apt to harm the delicate, congested lung with our irritant than to benefit the patient by the general anti-febrile effect? Here is a small section of healthy lung, with its functions already over-crowded. It is toiling to arterialize the venous blood pouring in upon it from the heart. It is struggling to get rid of congestion and to overcome the effects of inflammation. What madness then, at this juncture, to flood the organ with alcohol, and thus impose upon it the extra task of elimination! We must not forget, too, that by so doing we shall introduce a local irritant, and add fresh fuel to the fires of inflammation. The same contra-indications appear to exist in all other acute inflammatory affections. Experience has taught that in meningitis, peritonitis, and acute nephritis, as well as many other local inflammations, the use of

alcohol tends to increase the congestion and inflammation to a degree not to be compensated by its febrifuge effects.

3. Another practice which seems reprehensible, though much in vogue, is that of giving distilled spirits to women during the period of lactation. We have the authority of Carpenter (prize essay, page 152), for saying that "the regular administration of alcohol, with the professed purpose of supporting the system under the demand occasioned by the flow of milk, is 'a mockery, a delusion, and a snare.'" "For," he adds, "alcohol affords no single element of the secretion, and is much more likely to impair than to improve the quality of the milk." Pernicious effects upon the child from the ingestion of this alcoholized milk are apt to follow, and numerous digestive and nervous disorders may be traced directly to this unnatural custom. We fully agree with the views of Dr. Macnish, as quoted by Carpenter, that "if a woman cannot afford the necessary supply without the indulgences, she should give over the infant to some one who can, and drop nursing altogether."

4. We come next to inquire, what are the beneficial effects to be expected in *chronic* diseases from the use of alcohol? These diseases may be classified, for the present purpose, as the curable and the incurable.

The curable forms depend for recovery more upon rest, proper alimentation, and good hygiene, than upon the use of any drug. There is an inherent power within the body which tends to throw off morbid processes, without the aid of extraneous forces. This *vis medicatrix* of the system should not be thwarted in its operations by any such fallacious practice as the constant introduction into the circulation of an agent which is the perfect genius of degeneration and decay. It is proper, however, that an exception should be made here in favor of some of the milder forms of stimulants, such as the lighter wines, ale, or porter. For it has been customary to consider them, in certain cases, as valuable aids to weak digestion, a fact which few would care unqualifiedly to deny. So that in conditions in which these lighter forms of stimulants do actually promote a more perfect nutrition, and secure a more thorough alimentation, we should have a positive indication for their use. But on the other hand, the continued use of brandy, whiskey, rum, or gin, cannot fail to be just as prejudicial to the animal economy in the chronic cases under consideration as they are when similarly used in health. They will not only retard re-

covery, but will also be likely to establish the manifold vices—pathological and moral—of chronic alcoholism.

In the second or incurable class of chronic diseases, alcohol is given mainly for the purpose of diminishing the forces concerned in tissue-metamorphosis, and in this manner prolonging life. The discovery of the retardation of the changes of the blood corpuscles. (or oxyhemaglobin) by the presence of alcohol, gives to the latter an indorsement as a remedy which will check waste. In these melancholy cases of incurable chronic disease, such as phthisis, for example, patients will generally use stimulants till they die, and it is quite a difficult matter to decide with just how much benefit. According to my own experience, the poverty of good results is quite notable and discouraging. It has seemed to me quite probable, too, that the disturbances of nutrition, and the extensive impairment of the functions of vital organs through fatty degeneration, will commonly more than counterbalance the life-prolonging, waste-checking powers of alcohol when used protractedly as a fat producer.

Conditions in which Alcohol is indicated.

The value of alcohol as a medicine depends upon two things. 1st, On its action while in a free state in the blood. 2d, On the changes which it undergoes in the system.

1. While in its free state in the blood, it is a stimulant, an anæsthetic, and a narcotic. The pathological conditions likely to be benefited by this action at once therefore suggest themselves to us.

It will always be invaluable as a means of sustaining the heart's action during alarming crises of disease. In its stimulating power over the nervous system, and consequent influence upon the respiration and circulation in critical periods, it stands without a rival in the world. The medical profession then must always continue to employ it in the crises of fevers, in recovery from shock, in the dangerous syncope following violent hemorrhages, in antagonizing the powerfully depressing influence of morbific agents, and in various other critical and alarming junctures, familiar to every medical man.

In the role of an anæsthetic or a narcotic its importance is not so great. Yet in certain varieties of nervous disorders, by virtue of its sedative influence upon the nerve centers, it may indeed sometimes be of more value than other remedies.

2. When alcohol is changed in the economy, it antagonizes the normal process of oxidation, and becomes, not a respiratory food, but an anti-calorific and a conservator of fat. Hence it has taken a useful place as a means of checking abnormal waste. It may be employed profitably, to some extent no doubt, in that class of diseases in which the persistent waste of tissue is a prominent factor. From this quality it derives its chief value as a remedy in the continued fevers. For the purpose of reducing temperature, it must be given in large or poisonous doses if at all; consequently it would appear that its use in this direction should be limited to those cases in which the necessity is urgent and imperative. And finally, it has been used, with alleged beneficent results, in retarding the plastic and adhesive processes of inflammation. But in all cases whatsoever, when exhibited, let it be remembered that while doing good, it is ever liable in some insidious way to do harm. So that while expecting under its use to find new growth, we may find instead only suppuration and decay; while attempting to check rapid waste, we may have only brought on the cheesy and fatty change, and while fancying that we have found an *elixir vitæ* to rob death of its pangs, and to smooth over the traces of time and age, we may have been only carelessly invoking the baleful sorceries of the Demon of Dissolution!

ESSAY.

THE INSANE COLONY AT GHEEL.

By A. M. Shew, M.D.

How to provide for the indigent insane in the best manner consistent with their own welfare, the safety of the community, and with due regard to economy, is a problem that has puzzled municipalities, states, and nations. In the olden time, when all deranged persons were believed to be possessed by devils or evil spirits, the Christian conscience was apparently lulled into restfulness respecting their deplorable condition by the hopelessness of any contest with His Satanic Majesty. On no other supposition can we account for the apathy existing among civilized nations, and the cruel, yea, barbarous provision made for this afflicted class up to the close of the last century. We of a later generation can hardly credit the official records of those dark ages of lunacy. Recall, for a moment, the history of old Bedlam, more recently known as Bethlehem Hospital, where for nearly five hundred years the insane were kept chained in dungeons, scourged by cruel keepers selected for the office from among the worst criminals who were serving life sentences in the public jails; and visited only once a year by a physician for the purpose of bleeding and purging. The same facts existed respecting other receptacles for the insane until, at the close of the last century, through the labors of Pinel in France and the Society of Friends in England, more enlightened views respecting the nature of insanity began to prevail, and as a result, more humane methods of treatment.

As an exception to what has been said, there existed at Gheel, Belgium, a colony of the insane dating back to the seventh century. Having its origin in romance and superstition, it developed into a great system of governmental care of two thousand of the quiet

chronic insane. At a distance of twenty-seven miles from Antwerp, in a southeasterly direction, lies a tract of low country originally barren, desolate, and unproductive, which by draining, cultivation, and fertilization during eleven hundred years, has become productive, thickly populated, and somewhat attractive. Here we find ten thousand Belgian peasants occupying a territory twelve miles square, engaged in agriculture, the manufacture of lace, and the care of the insane. Before describing this unique colony as it appeared in the summer of 1878, permit me to refer briefly to its legendary development.

Sometime during the seventh century a beautiful Irish maiden, named Dympna, was beloved in an unholy manner by her own father. Being of a chaste and religious temperament, she was so shocked at the unnatural manifestation of sensual passion in her own parent, that she resolved to escape from his power by speedy flight. Having obtained the assistance and companionship of a reverend Father named Geburnus, she sought for a place of safety in a secluded part of Belgium. Here, away from the world, she could partially atone for her father's unholy devices by devoting her life to good deeds and religious meditation.

These were, however, soon disturbed by her wicked father, who, "incited by the devil," found his daughter and caused her to be beheaded. In dying she became a Saint, and has since devoted herself to the restoration of those who are mentally afflicted. The legendary story also informs us that Geburnus soon died and was buried beside the martyred girl. Hither came the insane from far and near, to be healed by the influence of the blessed Saint Dympna. A chapel was erected, and subsequently a church two hundred and fifty feet in length. The case containing the stones of the coffin of Saint Dympna is placed near one extremity of the church. The stone floor in the immediate vicinity is perceptibly worn away by those who have made intercessions to the Saint. Some ancient oaken tablets in carving, suspended upon the walls, represent important scenes in the life of the Saint—such as her birth; refusing incest with her father; ministering to sick people, etc., etc.

It was formerly the custom to present all newly arrived patients, and the ceremonies performed were as follows: There was a religious offering lasting nine days, during which the patient was kept in a house near the church in the charge of two old women. A priest said mass daily and read prayers. Three times during the


Plan
de la colonie d'aliénés de
Gheel.
Légende
A Infirmerie (Direction de la colonie)
B Eglise paroissiale St Amand.
C ω Ste Dymphne.
D Chapelle de Ste Dymphne.
E Eglise paroissiale St Lambert.
F Hospital Ste Elisabeth
G Eglise paroissiale St Hubert.
H ω Ste Rituc
I ω Ste Apollonie.
K ω Ste Lucie
L ω St Laurent.
La colonie de Gheel s'étend sur une superficie de 10853 hectares (formant le territoire de la commune) sa plus grande longueur, du nord au sud, est de 18120 metres, sa plus grande largeur, de l'est à l'ouest, est de 13612 metres, son perimetre est de 47 ½ lieues (de 5555 metres à la lieue) sa population est de 10496 habitants.
La colonie est divisée en trois sections, sous la direction d'un medecin inspecteur et trois medecins de section.

nine days it was necessary to make a circuit of the church, and to pass under the case enclosing the Saint's coffin. The procession was made up of the patient or patients, some children and religious devotees. While this was taking place the relatives remain in the church praying to the Saint to effect a restoration.

Such is the history of Gheel in its actual and legendary aspects. Whether the want of success has lessened the ardor and faith of those who believed in the beneficent influence of Saint Dympna, or whether more enlightened views respecting the nature of insanity have prevailed, it is evidently the fact that only a few of those who are sent to Gheel at the present day are subjected to any ceremony at the church of Saint Amaus.

New arrivals are now taken to the asylum and kept under the observation of the Medical Officer and Sisters of Charity until satisfied respecting their mental condition. This period varies from a few days to several weeks. The asylum or hospital is not large, but is well arranged, furnished, and attended. Neatness and cleanliness were manifest everywhere. Only eight patients were occupying the buildings at the date of our visit in July. One hundred can be accommodated. The rule is to send them out to families of the commune as soon as practicable.

The village of Gheel, like all Belgian towns, is substantially built of brick and stone, having narrow, paved streets. A small hotel near the public square furnishes accommodations to the few visitors who chance to find their way to this peculiar place. The arrival of the diligence daily is an event of sufficient importance to collect a small crowd. At other hours the streets seem deserted, and nothing occurs to disturb the silence of the place. We found a few small shops at which wooden shoes, pipes and tobacco, and small trinkets could be purchased. Our entrance did not even disturb the slumbers of the would-be female merchant at one of these shops. At the door of one of the houses two women were at work making thread lace; and at another two imbecile boys were sitting on the ground nodding to the sun which poured down upon their unshaded heads. These and the hotel-keeper were the only people we saw in the streets of Gheel. It seemed like walking about a city of the dead, or a place depopulated by sudden pestilence.

The arrival of an American is evidently an unusual event. The landlord exclaimed, "Jesu, four Americans in one day! Monsieur, two professional countrymen, doubtless your friends, arrived

this morning and are now visiting the hamlets." The man could hardly conceal his astonishment when, later in the day, we being introduced to the two Spanish gentlemen from Brazil, were unable even to converse with them.

The better class of patients are provided for in the village, where the accommodations are good, and these houses are readily shown to visitors. In one of them I found an English gentleman who had the use of a sitting room, bed-room, and garden, at an expense of 3,500 francs per year, or about $14 per week. But nearly all of the houses are rigidly plain and lacking in comforts. The sleeping accommodations are often provided in garrets, lofts, and out-of-the-way nooks and corners. As the patients and peasants all fare alike in this respect, there can be no ground for complaint. The condition of both sane and insane living in the commune outside the village cannot be described by that expressive word comfortable. The hamlets are low, dark, and damp, destitute of wooden floors, and covered with thatched roofs. Much discomfort must be endured during the inclement season of the year. Nearly all of the patients labor in the fields with the peasants who board them. During the time of our visit the crops were being harvested, and it was no uncommon thing to see men, women, and children working together. The women, as a class, appeared stronger, brawnier, and more muscular than the men. In six different fields we saw women harnessed to carts; in other words the team was made up of a small cow on one side of the cart-pole, and a woman on the other. The children did most of the raking and binding. All had the old, worn look that is produced by overwork and underfeeding; those who were not barefooted wore wooden shoes. The farming implements were old and primitive. The impression made by personally going about among the hamlets was not favorable. It was impossible to resist the feeling that you were among a community of poverty-stricken people, who were struggling, against fearful odds, for a bare existence. If these appearances are evident in July and August, the pleasantest season of the year at Gheel, how much more manifest would they become during the winter months.

Every hamlet contained restraining apparatus; but I only saw three patients wearing mechanical appliances. The landlord informed us that patients were restrained when excited, at the discretion of the people having them in charge; but as a rule they had comparative liberty, and constant out-door employment. Ac-

cidents frequently occur, as in other places where the insane are congregated. Several tragedies have marked the history of Gheel, but as no accurate records are kept, it is impossible to ascertain the comparative liability to serious accidents of this commune and other congregations of the insane.

The opportunities are certainly much greater, the supervision much less. Reasoning *a priori*, we should expect disturbances, annoyances, and liability to greater abuses under this system than could possibly occur in a well-regulated institution.

The only safe-guards are three physicians and a number of "Commissaries des Police," appointed by the government to reside at Gheel and look after the interests of the insane. They are required to inspect the hamlets, to prevent abuses, and to report such suggestions as are deemed best for the improvement of the commune. They have authority to transfer violent and excitable patients to the regular asylums at Antwerp, Brussels, and elsewhere. Their visits are not regular or systematic, and extend over such a large territory that many of the hamlets are not inspected oftener than once annually, unless a special call is sent to them. Such was the information given to us by an intelligent gentleman, formerly a patient, who acted as our cicerone.

In considering the advantages and disadvantages of Gheel, it should be remembered that the Belgian government has established a number of large asylums or hospitals, some of them quite recently, for the treatment of the insane. It appears to be the policy to send only the quiet chronic cases to Gheel. Doubtless there still remains in the minds of the ignorant peasants a faint, flickering belief in the restorative power of St Dympna, but the governmental authorities consider the matter in a practical way only. From their stand-point this colony provides a method of care for the chronic insane, at moderate cost.

I have thus hurriedly described Gheel as it appeared during the summer of 1878.

Few alienists have visited the place, and of these only a half-dozen have published anything descriptive of its history and field of usefulness.

Esquirol was at Gheel in 1812. He saw those "whose flesh was lacerated by the chains they had worn, and noticed in houses near the chimneys and the beds iron rings with chains attached."

In 1848 M. Morel wrote, "The families that have charge of them (the insane) are for the most part kind and humane, but that

they have no method of restraining or securing the violent and furious but by chaining them, and that serious accidents not unfrequently occur; that a short time since the burgomaster was killed by a maniac."

Our eminent confrére Dr. Pliny Earle visited Gheel in 1849. In his account of the colony he uses the following language: "Within the town I saw but one patient in the streets upon whom there was any restraining apparatus. His waist was encircled with an iron belt, to which his hands were secured by wristlets. In the suburbs and around the farm-houses, however, there were several who were fettered with iron, the chains between the anklets being about eight inches in length. In some cases the rings about the ankles had abraded the skin and occasioned bad ulcers. Of the seventy hospitals, asylums, and other special receptacles, counting Gheel as but *one*, which it has fallen to my lot to visit, there are but two at which I saw insane persons in any way personally restrained by heavy chains. These are Gheel, and the Timarhané, at Constantinople. At the latter a man was chained by the neck to the wall. At one of these houses a patient slept in a place which, wherever situated in the building, no New England farmer or mechanic would think fit for the lodging of any of his household, other than the cat or dog; and, as it was, it was too far out of the way even to be thought of for that purpose. It was a low, three-cornered opening in the attic, formed by the floor, the slanting roof, and an adjacent room. Ascending a ladder to reach it, the patient was obliged to crawl into it upon all fours, and there he found his bed of straw. The question naturally arises: If in the comparatively small number of houses that I visited there was one such dormitory, how many were there in the whole commune?"

In the seventieth report of the Friends' Retreat, near York, Dr. Kitching pays considerable attention to the development of the social life of the insane. Speaking of Gheel he says: "It is acknowledged by some of the best judges to have failed in producing the benefits anticipated from it. Its failure was inevitable, as plans founded on wrong principles must sooner or later always be. Whilst seeking to avoid the evils of congregation, it ran into the opposite extreme of individual treatment—a mode of treatment the least adapted to many forms of lunacy, even in their chronic stage.

The patient cannot, in an isolated condition, be supplied with all that he requires, on account of the expense of providing it." The

treatment should therefore be an associate treatment. The industrial training which forms a prominent feature in the Gheel plan can be quite as well carried on in a large lunatic asylum, and in the latter is much less liable to be monotonous and influenced by sordid motives than in the cottage of the artisan."

In an article on "Hospital and Cottage Systems" published in the *American Journal of Insanity*, July, 1870, are the following truthful words: "Gheel is unique; a warning rather than example. It had no historical predecessor, and has had no competitor nor imitator for a thousand years. It has answered a purpose for chronic cases amongst a people unwilling to change even by way of improvement, and remarkable for great simplicity of manner and habits of life. It is a cemetery of the living, where, from infancy to old age, generation after generation has vegetated and dozed in a hopeless and unambitious monotony, with no other gift or aspiration except to feed, lodge, and care for imbecility, idiocy, and senility. The various attempts which have been made to combine that sort of treatment with modern modes do not warrant repetitions of such experiments."

In 1863 the celebrated Dr. Conolly declared that "the Gheel system is not one that he should like to see followed in England."

During the same year Dr. W. A. F. Browne, one of the Commissioners in Lunacy for Scotland, speaking of Gheel said, "It afforded the last glimpse of a mediæval condition, incrusted with the stains and corruption of a worn-out organization, where faith in the supernatural has faded away, and the sun of science had not yet arisen." Dr. Browne also says, "the amount of restraint by camisoles, straps, chains, and iron girdles in Gheel is painful and unjustifiable."

In his report to the New York State Board of Charities in 1876, Dr. H. B. Wilbur speaks of Gheel in terms of glowing enthusiasm. But in conclusion he uses the following language: "In the United States we lack the class of families that render the system practicable in Belgium and Scotland." In these few words Dr. Wilbur has justly acknowledged the superiority of the American laboring classes, as well as the defects of this ancient semi-superstitious system. It would be just as impossible to establish an American Gheel as it would be to adopt the customs and habits of the Belgian peasants. The world moves; progress has been made and acknowledged. Gheel has served a good purpose for many centuries; but the world will not witness the establishment of another commune patterned after that of Saint Dympna.

I have thus attempted to sketch briefly and concisely the most obvious and prominent features of this celebrated colony. In conclusion, a few of the manifest defects of the system are the absence of medical care, the confusion of sexes, the extreme poverty of many of the peasants who keep them, the small, poorly ventilated sleeping rooms, the want of animal food and wholesome diet, and the almost unlimited opportunity for abuse of patients.

From personal observation and from all I have been able to learn respecting Gheel, I believe it may be a tolerable place of residence for the quiet chronic insane, but it is not a good curative arrangement for those who are excited or violent, or who require medical treatment.

OBITUARIES.

CHARLES L. IVES, M.D., NEW HAVEN.

By Wm. B. DeForest, M.D., New Haven.

Charles L. Ives, the only child of the late Dr. Nathan B. Ives of New Haven, was born June, 1831, and died March 20, 1879, aged 47 years. His preparatory course for College was at the Hopkins Grammar School, from which he graduated at the age of seventeen, at once entering Yale, from which he graduated in 1852, at twenty-one. He received his medical degree from Jefferson Medical College in 1854, and after two years spent in study in New York, commenced practice in New Haven, being associated with his father. Upon the death of Prof. Worthington Hooker, in 1867, he was appointed Prof. of Theory and Practice of Medicine in the Medical Institution of Yale College, a position which he held until 1873, when he resigned to accept the Professorship of Diseases of the Mind and Nervous System in the post-graduate course of the University Medical College of New York. From 1867 to 1872 he was one of the Medical Visitors to the Retreat for the Insane, and contributed handsomely towards the completion of "Ives' Amusement Hall," named after his father, through whose generosity it was erected. After leaving Yale he spent a year and a half in Europe, but finding his health would not allow his resuming active work, he resigned his appointment in New York. He returned to America in 1874, but from ill health did not resume active professional work. He died from cancer of the rectum—the immediate cause of death secondary hemorrhage, a few days after a surgical operation for its removal.

Dr. Ives was married in 1860, but left no children. He early in life professed his belief in the Christian religion, and was an earnest and active Christian during his life. In the words of a life-long friend, "He possessed a rare purity of character, great singleness and earnestness of purpose, with a fearless devotion to the advocacy of all that seemed to him to be good and true and noble."

EDWIN A. PARK, M.D., NEW HAVEN.

By Wm. B. DeForest, M.D., New Haven.

Edwin A. Park was born at Preston, January 27, 1817. He graduated at the Medical Institution of Yale College in 1846. New Haven was his first and only field of practice, and here he spent a professional life of thirty-two years, gaining the esteem of all that knew him. He died January 17, 1879, having been obliged for short periods to give up practice from ill health, for several months before his last illness. He leaves a wife and four children.

A resolution, adopted by the New Haven Medical Association at the time of his death, very generally express the sentiments of his associates in these terms, viz. :

Resolved, That the late Edwin A. Park, M.D., by his long and untiring fidelity to his professional duties, both to his patients and to his medical brethren, laid a lasting foundation for the respect in which he was held while in life, and for the affection which bound him so warmly to the homes and the hearts of those to whom he ministered, and that he has left us, in these things, an ensample how we should walk.

WILLIAM M. WHITE, M.D., NEW HAVEN.

By William B. DeForest, M.D., New Haven.

Dr. W. M. White was born in Stockbridge, Mass., in 1823, and died of apoplexy February 21, 1879, aged 67.

He received his medical degree from Berkshire Medical College in 1843, and commenced practice at Centerville, but soon removed to Fair Haven, a district of New Haven, where he resided during the remainder of his life. He was very active in military organizations during the war, and was sent in 1863 as a special agent from the Executive department to visit the sick and wounded Connecticut volunteers, in the U. S. Military Hospitals, chiefly in Washington, receiving appointment as Surgeon of Volunteers from Gov. Buckingham, October, 1863. After the commencement of the Union Pacific Railroad, Dr. White was appointed by President Lincoln one of the three Commissioners to examine the work on

behalf of the government, a position which he held to the completion of the road, to the entire satisfaction of the government. His death was sudden, although he had been subject to congestive attacks for some time previous. He leaves two children, a son and daughter.

STEPHEN CHALKER BARTLETT, M.D., WATERBURY.

By W. R. Bartlett, M.D., New Haven.

The subject of this sketch, Stephen Chalker Bartlett, M.D., was born in North Guilford, April 19, 1839; he died on the morning of February 3, 1879, and would have been forty years of age had he lived until the following April. He was the eldest son of Stephen R. and Susan (Chalker) Bartlett. His boyhood was passed at the family home; he received an excellent education, and his medical studies were carried on at the Yale Medical School, where he graduated in January, 1866. Previous to graduation he served in the U. S. Military Hospitals at West Philadelphia and Chester, Pa., and as medical cadet at the Knight Hospital in this city, also as assistant surgeon in the U. S. Navy in 1864–5, being assigned to duty as surgeon of the gunboat Lenapee of the North Atlantic squadron, and after the capture of Fort Fisher took part in the expedition up the Cape Fear river, which resulted in the capture of Wilmington. During his stay at that place he was in charge of a temporary hospital of U. S. soldiers and sailors. After graduation he entered upon a successful medical practice at Naugatuck, where he remained six years. Here he married Julia B., daughter of A. J. Pickett. In 1872, in order to facilitate the demands of his professional work, he removed to the adjoining city of Waterbury, and there conducted a large and valuable practice. Having been engaged in a fatiguing and protracted obstetrical case on the night of January 24th, he continued about his business during the following day, as usual, taking a drive of some five miles to visit a patient on the afternoon of that day. Returning, he was taken ill with the premonitory symptoms of pneumonia, which soon assumed a positive form, and in spite of active treatment it continued to increase in severity, passing from the lower lobe of the left lung upwards. Pleurisy supervened on the evening of the third day of his illness to a marked degree, involvement of the lower portion of the right lung followed next,

and he succumbed to the severity of the disease, after eight days of sickness.

Of a positive nature as a practitioner, Dr. Bartlett was clear and comprehensive in the diagnosis of disease, having the ability to grasp the salient points of a case with accuracy and precision, and he possessed to a large degree the happy faculty of adapting remedies to the exigencies which would arise in its course. He was conservative in his views, but held a proper estimate of the effect of remedial agents in the treatment of disease, while the importance of the great principles of hygiene were duly appreciated. Among his important surgical cases should be mentioned one of skin grafting upon an extensive scale, the patient being a young woman whose scalp was torn off by machinery. To its restoration he devoted much time and patience, and was rewarded after nine months by a complete cure, the case being an eminently successful one, and was probably the first attempt to carry on skin grafting on so large a scale in this country. The case was reported in the *American Journal of Medical Sciences*, in 1872, and also in the proceedings of the Connecticut Medical Society, in 1874, to which reference is made. In 1876 he was elected a Fellow of the Connecticut Medical Society, and 1878 was appointed by the State as a post-surgeon to examine candidates for exemption from military duty in New Haven county.

Dr. Bartlett had a positive and practical belief in the doctrines of the Christian religion, and carried them into effect in a consistent and well ordered life, and during his last sickness was sustained by a sure and certain hope of a blessed life to come. In private life he enjoyed the rare esteem of his fellow men as an upright, valued citizen, and his death was universally mourned. Thus he died in the vigor of a full manhood, in the service of humanity, in that special field of labor reckoned so peculiarly its own. His wife and one child survive him.

THOMAS D. DOUGHERTY, M.D., WATERBURY.

By John I. Neville, Waterbury.

Thomas D. Dougherty was born in Ireland, in 1829, and died in Waterbury, of apoplexy, November 22, 1878, aged 49.

His father settled in Ohio when he was about three years old, and dying soon after left wife and son in limited circumstances.

He, however, graduated at Mount St. Mary's, Emmettsburg, Md., at the age of 19, and for two years after was professor of the Greek and English languages at that College. He graduated at the New York Medical College in 1853, taking the first prize for his thesis, which was in Latin; he practiced a short time in New Haven, and then settled permanently in Waterbury, where he acquired an extensive practice. He was a good student, keeping fully abreast with the progress of the day. He was registrar of births, marriages, and deaths for many years, a member of the Board of Education, and trustee of the Bronson Library. He was of unflinching integrity and unfailing devotion to his religious convictions. He leaves a wife and six children.

NEWTON BUSHNELL HALL, M.D., BRANFORD.

By Wm. B. DeForest, M.D., New Haven.

Dr. Newton B. Hall was born March 14, 1828, at Canaan, Pa. He was the only son of Amaziah Hall, who removed to Branford when the subject of this sketch was five years old. His education, before entering upon a professional course of study, was received at the "Branford Academy." At a suitable age he became a student of medicine in the office of the late Dr. H. V. C. Holcomb, his friend and neighbor. After the prescribed course of study and attendance on medical lectures, he graduated in the class of 1863, at the Medical Department of Yale College. The early friendship of his instructor and the wishes of his friends led him to practice his profession in Branford, where he enjoyed the confidence and esteem of the community.

For three or four years his health had been much impaired by a complication of rheumatism and malarial fever. This had narrowed the limits of his practice, but he was able still to retain much of his home work, and was thus engaged until a week before his death, of the cause before named, on the 21st of July, 1878.

In 1857 Dr. Hall united with the Masonic Fraternity, and was a member of the "Masons' Mutual Benefit Association." He was in the communion of the Congregational church for the past twelve years. The wife of his youth and one child, a daughter, survive him. The impress of a life spent in useful labor, with an untarnished name, lives in the lives and memories of the community.

SAMUEL JOHNSON, M.D., BOZRAH.

By S. L. Sprague, M.D., Norwich.

Dr. Samuel Johnson was born in Bozrah, July 1, 1805, and died February 12, 1879, in the 74th year of his age. He was the son of Isaac and Phebe (Burchard) Johnson.

When quite young he had an attack of periostitis of the tibia, which resulted in necrosis, rendering him a cripple for some time, and greatly enfeebling him.

He commenced the study of medicine with Dr. Earl Knight, of Bozrah, with whom he remained one summer; after which he studied with Dr. Joseph Peabody, of Montville, studying summers and teaching school winters. He attended his first course of lectures at the College of Physicians and Surgeons, New York City, in 1828, and graduated at Yale Medical School in 1829, in a class of twenty. Immediately after graduation he settled in Bozrah, where he was engaged in practice without intermission until his death.

His practice was for the most part very arduous, consisting of long rides over hilly roads, frequently driving fifteen to twenty miles to visit patients. During the first thirty years of his practice he did not enjoy perfect health, rarely ever a winter passing without being confined to the house or bed for a longer or shorter period.

He had three students of medicine, besides his two sons, who are graduates, Dr. Hough of Essex, Dr. Matthewson of Durham, and Dr. Hough of Putnam. He was married in 1836. He had seven children, three of whom died in early life. His widow and three sons survive him.

The sad and untimely death of his daughter, at the age of twenty-two, an accomplished and lovely girl to whom he was fondly attached, was a terrible shock which nearly crushed him, and which saddened the remaining years of his life.

His last sickness—angina pectoris—was very brief, lasting less than twenty-four hours. The day before his death he appeared in usual health, having been out nearly all day visiting patients and some intimate friends, and during the evening he was very cheerful.

Dr. Johnson was sincere and earnest in his convictions of duty. He possessed a quick perception of the nature of disease, and was keen in diagnosis. He was an agreeable man to meet in consultation, having kindness of manner, honesty of purpose, good judgment, and practical common sense.

MILTON BRADFORD, M.D., WOODSTOCK.

By A. S. Leonard, M.D., Woodstock.

Dr. Milton Bradford was born on the 12th day of January, 1808, in Woodstock, and died at Woodstock, October 1, 1878, aged 70 years. He graduated at Brown University in 1828, in the class with Hon. L. F. S. Foster. He studied medicine immediately thereafter, and commenced the practice at West Woodstock, where he resided till the time of his death. As a physician, Dr. Bradford has a reputation that will bear the test of years. In him medicine has to lament a man who not only ornamented the profession by a noble and upright character, but who with untiring and conscientious industry was always adding to medical knowledge. He secured the confidence of the community and obtained a large practice, riding a circuit of more than twenty miles, and a large consultation practice in the county and adjoining towns of Massachusetts, which he retained until within about ten years before his death, when he refused all business on account of his health; though after that many of his old friends would prevail upon his good nature and sympathy, and sometimes get professional services from him; but for a few years past his failing health has prevented this. He was very decided and positive in his convictions, and very persistent in carrying out his plans. After having formed his professional opinions, he was free to express them in an honest and conscientious manner, alike to his patients and his friends. He took, years ago, an active and prominent part in the temperance cause. In politics he was a strong anti-slavery man. He represented the town in the General Assembly in 1861, but was generally adverse to holding public positions. Indeed, he was always so pressed with business that he had no time for such work He was an exemplary Christian, and whenever consistent with his duties was found in his place in the house of God. Dr. Bradford had a keen relish for fun, and had the happy faculty of keeping people in the best of humor, drawing from an inexhaustible fund of anecdote at pleasure.

DANIEL A. HOVEY, M.D., KILLINGLY.

By E. A. Morse, M.D., Killingly.

Daniel Alfred Hovey was born Feb. 24, 1809, at Hampton, died Oct. 11, 1878, at Killingly, aged 69.

He graduated at Yale Medical School 1830; commenced the practice of his profession in South Killingly, where he remained during his life, nearly half a century of active labor among a scattered people. A tendency to pulmonary disease prevented the enjoyment of vigorous health, but he resigned business entirely only a year before death. Dr. Hovey was married three times — early in life to Miss Eveline Chase of Abington, after her death to Miss Mary Wood of Killingly, and to Mrs. Mary Kies of Killingly, who survives him; he left three children. Dr. Hovey occupied many positions of trust in this town; was a member of the Legislature in 1850; an active member of the Windham Co. Medical Association, he was at his death its oldest member.

He was a Mason and buried under the auspices of that order. Honorable in his business, faithful in friendship, kindly memories will be always cherished of him by the people among whom he passed his days.

HARVEY CAMPBELL, M.D., VOLUNTOWN.

By Ashbel Woodward, M.D., Franklin.

Harvey Campbell was born Sept. 30, 1792, during the first presidency of General Washington, and died Sept., 1877, in Groton, at the residence of his daughter, aged 85 years. His father, Dr. Allen Campbell, filled the position of both physician and clergyman in Voluntown; and the son in youth was a teacher, and effective lay worker also in the church.

He graduated when 24 at Yale Medical School, and commenced practice in his native town, where he continued until disabled by a shock of paralysis ten years previous to his death. He was a welcome visitor through a wide circuit; his popularity was evidenced by his election to both branches of the State Legislature when his political party were in the minority. He was a strong advocate of temperance, an active worker in efforts to ameliorate the condition of the insane, and an upright, public spirited citizen.

He was fond of writing, and for many years acted as local correspondent for the Norwich *Courier*, contributing racy, readable letters. He was an active member of the State Society, serving as Fellow ten times between 1824 and 1865.

REMUS M. FOWLER, M.D., WASHINGTON.

By Orlando Brown, M.D., Washington.

Dr. R. M. Fowler was born at Torrington, 1793, and died at Washington, March 1, 1879, aged 86, having spent sixty-five years in the active practice of his profession. and lived to see two generations grow up around him. He was the youngest son in a family of seven sons and five daughters. Three of the sons became physicians, Warren R., who died in Washington in 1826, Parlemon B., who died in Bethlehem soon after commencing practice; Remus M. studied with his brother Warren, 20 years his senior, was licensed by the Litchfield Co. Association in 1815; received the degree of M.D., from Yale and the Connecticut Medical Society, in 1824. He settled in New Marlboro, Berkshire county, Mass., in 1815, and soon after married Miss Harriet M. Childs, of Litchfield, who died in 1824, leaving two daughters. After the death of his brother in 1826 he settled in Washington, where he remained until his death. He secured an extensive practice and a consultation practice through the county and neighboring towns of Massachusetts.

He was especially noted for the ease and readiness with which he could command the knowledge acquired by reading or experience, and this ready adaptability rendered him a valuable assistant in cases of emergency. He was a ready conversatioualist, with an inexhaustible fund of anecdote at his command. Interested in the collateral branches of natural science, he retained his mental faculties in vigor until the close of life. He was very apt in the witness stand, maintaining the credit of the profession in that trying position. He was a zealous advocate of temperauce, a profound hater of slavery, his charity and practical philanthropy characteristic, of strong religious temperament, while a hater of dogmatic theology. He was active in the county and state, and a member of the National Medical Society. He was a man of tried and unvarying probity in his professional and social relations. He married, soon after removing to Washington, Miss Mary Miller, by whom he had one son and a daughter.

The immediate cause of death was hypertrophy of the heart, and a short time previous to his death he was sitting up testing the action of his heart. His wife and all his children, save one daughter, survive him.

ADONIJAH WHITE, M.D., ANDOVER.

By Charles F. Sumner, M.D., Bolton.

Adonijah White, M.D., son of Capt. Adonijah White and Hannah Kingsbury, was born in Hebron, Conn., April 8, 1794, and died June 8, 1853, in Andover, Conn., aged 59. Dr. White was one of a large family of children, among whom Lemuel White, Esq., Dr. George White, and Augustus K. White, Esq., were quite noted. Dr. White studied in the office of Dr. Samuel White of Hudson, N. Y., attended medical lectures at Yale College, and commenced practice in Cazenovia, N. Y. He left that place in 1819, and removed to Van Buren, N. Y., where he held many positions of public trust, all of which he filled with honor to himself and credit to his constituents. He married Miss Lucia Dow of Coventry, Conn., Feb. 12, 1810. He left Van Buren in 1843, for Andover, Conn., the home of his youth, hoping to regain his health, and be near his relatives and friends. Dr. White was elected a member of the Legislature from Andover in 1850, was twice one of the Fellows of the State Medical Society, and in 1850 received the honorary degree of M.D. from Yale College. Dr. W. had some twenty students under his instruction at different times, many of whom were highly distinguished in the profession and in public life, among them Hon. Daniel T. Jones, M.D., James R. Dow, M.D., and others. He was popular and successful as a physician, and highly esteemed as a citizen.

[This sketch should have been included in the "Early Physicians of Tolland County," but the facts were not then obtainable. It is accordingly inserted here.]

WM. H. RICHARDSON, M.D., MANSFIELD.

By A. W. Barrows, M.D., Hartford.

William Henry Richardson, M.D., only son of Levi and Amelia (Trumbull) Richardson, was born December 5, 1808, in a part of Mansfield now included in the town of Chaplin, Conn. Early in life he removed, with his parents, to North Mansfield, where he spent much the greater part of his life, and where he died December 14, 1878, at the age of 70 years.

After a thorough preparatory course, he commenced the study of medicine with Dr. Archibald Welch of Mansfield, remaining with him some two years, subsequently pursuing his studies with Dr. Samuel B. Woodward of Wethersfield, and Dr. Silas Fuller

of Columbia, and graduating from the medical department of Yale College in 1834. Soon after his graduation he returned to Mansfield, and immediately entered on the active duties of his profession, which he prosecuted with assiduity and success for more than forty years, enjoying the confidence and esteem of his patrons and the good will of the community generally.

Dr. Richardson was devoted to the welfare of his patients, kind and sympathetic, and true to the confidence reposed in him. He investigated disease with great particularity and minuteness, and if he sometimes asked a great many questions, and at times seemingly unnecessary ones, it was not from a spirit of inquisitiveness, but from a desire to learn everything which could have a bearing upon the case. He used frequently to remark that it was not only necessary to question, but to *cross-question* a patient in order to elicit all the facts in his case. As a practitioner, he was cautious and conservative, slow to accept new theories of disease, or to adopt new and novel methods of treatment. He used, comparatively, but few medicines; these were usually well chosen and well applied.

As showing how Dr. Richardson was esteemed as a citizen and friend, I may be pardoned, perhaps, for quoting from a private letter, written by his former pastor and intimate friend soon after his death. After referring to his personal loss, etc., he says, "It is a relief to me at this time to speak of his integrity, his charming frankness and simplicity of character, the beauty of his manners in the home circle, his deference and his consideration for the feelings of all; the brightness and humor of his conversation, his large humanity, and his uniform polite hospitality. It was always a mental rest to call on him, and always a pleasure to be a guest in his house." He was interested in the promotion of temperance, good morals, and whatever pertained to the welfare of the community. For many years he served as school visitor. In 1862 he represented the town in the State legislature.

He was married in 1853, to Mrs. Abigail Dimock, daughter of Edmund Freeman, Esq., of Mansfield, Conn. She, with their only child, a son, survives him. His venerated mother is still living, in her 94th year.

Some three years before his death his health became impaired, so that he was obliged to lessen his labors, although continuing to attend patients to some extent till the last year, when he abandoned practice altogether. His disease was nervous prostration, gradually culminating in serious brain trouble.

MEMBERS OF THE SOCIETY

HONORARY MEMBERS.

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J. MARION SIMS,	New York City.
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GEORGE CHANDLER,	Worcester, Mass.
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P. A. STACKPOLE,	Dover, N. H.
S. L. F. SIMPSON,	Concord, N. H.
A. T. WOODWARD,	Brandon, Vt.
WM. McCOLLOM,	Brooklyn, N. Y.
J. C. HUTCHINSON,	Brooklyn, N. Y.
BENJ. E. COTTING,	Boston, Mass.
HENRY I. BOWDITCH,	Boston, Mass.
SAMUEL T. HUBBARD,	New York City.
GEO. F. HORTON,	Terrytown, Pa.

PROPOSED FOR HONORARY MEMBERSHIP.

A. N. BELL,	Garden City.
E. SEGUIN,	New York.

ORDINARY MEMBERS.

The names of those who have been Presidents are in Capitals.

HARTFORD COUNTY.

R. W. GRISWOLD, M.D., of Rocky Hill, President.

JAS. CAMPBELL, Jr., M.D., of Hartford, Clerk.

Censors.

G. W. Russell, M.D., P. M. Hastings, M.D., A. W. Barrows, M.D.

Hartford, G. B. Hawley,* G. W. RUSSELL, David Crary,* P. W. Ellsworth,* E. K. HUNT, J. S. Butler,* J. C. Jackson, A. W. BARROWS, P. M. Hastings, W. H. Tremaine,* Lucian S. Wilcox, Henry P. Stearns, Irving W. Lyon, Melancthon Storrs, Horace S. Fuller, John O'Flaherty, Nathan Mayer, Wm. M. Hudson, George C. Jarvis, W. A. M. Wainwright, David Crary, Jr., Geo. F. Hawley, J. B. Lewis, D. T. Bromley, George P. Davis, C. W. Chamberlain, Jas. Campbell, G. W. Avery, Eli Warner, C. E. Frœlich, John Dwyer, Harmon G. Howe, Joseph A. Coogan, W. T. Bacon, W. W. Knight, R. H. Tiffany,* C. W. Page, T. D. Crothers, Geo. L. Parmele, R. B. Talbot, Ellen F. Hammond, H. B. St. John, Geo. R. Shephard, A. J. Weed, F. S. Crossfield, C. J. Surredge.

Avon, Wm. Howard.

Berlin, E. Brandegee.

Bloomfield, Henry Gray.

Bristol, Henry E. Way.

Broadbrook, H. O. Allen.

Canton, Collinsville, G. F. Lewis, G. R. Roberts.

East Hartford, S. L. Childs,* L. W. McIntosh,* S. B. Newton, E. J. McKnight.

East Windsor Hill, Sidney W. Rockwell,* William Wood.

Warehouse Point, Marcus L. Fisk.

Enfield, Thompsonville, Edward F. Parsons, Rial L. Strickland.*

Farmington, Frank Wheeler, Charles Carrington.

Plainville, T. G. Wright, J. N. Bull.

Granby (North), Francis F. Allen,* G. W. Edwards.

Glastonbury, H. C. Bunce.

Buckingham, G. A. Hurlburt.

South Glastonbury, H. M. Rising.

Manchester (North), R. M. Griswold, F. J. Whiton.

South Manchester, J. N. Parker.

New Britain, B. N. Comings, S. W. Hart, Geo. Clary, E. B. Lyon, J. S. Stone, Erastus P. Swasey, M. J. Coholan.

Rocky Hill, R. W. Griswold.

Simsbury, G. W. Sanford,* R. A. White.*

Southington, I. P. Fiske, G. W. Steadman.

Suffield, J. K. Mason, William H. Mather.

West Hartford, Edward Brace.*

Wethersfield, A. S. Warner.

Windsor, S. A. Wilson, Newton S. Bell.

Poquonock, R. E. Ensign.

Windsor Locks, S. R. Burnap. —92

*Over sixty years of age.

NEW HAVEN COUNTY.

M. C. WHITE, M.D., of New Haven, President.

A. H. CHURCHILL, M.D., of Meriden, Vice-President.

C. W. Gaylord, M.D., of Branford, Clerk.

W. R. Bartlett, M.D., of New Haven, County Reporter.

Censors.

W. H. Carmalt, M.D., H. A. Carrington, M.D., W. R. Bartlett, M.D.

New Haven, E. H. Bishop,* Levi Ives, P. A. JEWETT,* David L. Daggett, David A. Tyler, HENRY BRONSON,* S. G. Hubbard, C. A. Lindsley, John Nicoll, Moses C. White, H. Pierpont, Leonard J. Sanford, Edward Bulkley, W. B. DeForest,* F. L. Dibble, T. Beers Townsend, T. H. Bishop, Henry A. DuBois, Francis Bacon, W. L. Bradley, A. E. Winchell, H. A. Carrington, L. M. Gilbert, Robert S. Ives, Evelyn L. Bissell, F. J. Whittemore, Arthur Ruckoldt, Stephen H. Bronson, Willis G. Alling, Frank Gallagher, Walter R. Bartlett, Walter Judson, Ira S. Smith, D. C. Leavenworth, George B. Farnam, J. F. Lines, Frederick Bellosn, S. H. Chapman, William H. Hotchkiss, J. F. C. Foster, F. O. White, B. S. Lewis, E. L. Thomson, W. H. Carmalt, M. A. Cremin, T. P. Gibbons, T. H. Russell, James J. S. Doherty, F. H. Whittemore, C. P. Lindsley, H. Fleichner, Max Mailhouse, Edward Dwight, R. J. Gibson, M. C. O'Connor.

Fair Haven, Charles S. Thomson,* W. H. Thomson, S. D. Gilbert.

Westville, J. W. Barker.

Derby, Charles H. Pinney.

Birmingham, Ambrose Beardsley,* G L. Beardsley, J. B. Jewett.

Branford, C. W. Gaylord.

Stony Creek, Walter Zink.

North Branford, E. A. Wood, W Campbell.

Cheshire, M. N. Chamberlin.

Guilford, Alvan Talcott,* G. P. Reynolds.

Hamden, E. D. Swift, O. F. Treadwell

Madison, D. M. Webb.

Meriden (West), B. H. CATLIN,* Asa H. Churchill, Frederick J. Fitch, C. H. S. Davis, N. Nickerson, A W. Tracy, E. M. Child, E. T. Bradstreet, Anna J. Ferris.

Milford, Hull Allen,* L. N. Beardsley, Thomas Dutton,* Wm. H. Andrews.

Naugatuck, E. S. Meers.

North Haven, R. F. Stillman,* R. B Goodyear.

Orange, West Haven, J. Martin Aimes, John F. Barnett.

Oxford, Lewis Barnes.

Seymour, Thomas Stoddard,* S. C Johnson,* Joshua Kendall.*

Southbury, A. B. Burritt.*

South Britain, N. C. Baldwin.

Wallingford, Nehemiah Banks, B. F. Harrison, H. Davis, J D McGaughey.

Waterbury, G. L. Platt,* Alfred North, Edward L. Griggs, H. E. Castle, E. W. McDonald, J. J. M. Neville. —107

*Over sixty years of age.

NEW LONDON COUNTY.

E. C. KINNEY, M.D., of Norwich, President.

A. Peck, M.D., of Norwich, Clerk.

Censors—I. G. Porter, M.D., A. B. Haile, M. D., L. S. Paddock, M.D.

County Reporter—L. S. Paddock, M.D.

New London, ISAAC G. PORTER,* Robert A. Manwaring,* A. W. Nelson, F. N. Braman, Henry Potter, J. G. Stanton.
Franklin, ASHBEL WOODWARD.*
Griswold, George H. Jennings.
Groton, Mystic River, A. W. Coates,* John Gray.
Lebanon, W. P. Barber.
Montville, William M. Burchard.
Mystic, Mason Manning,* Albert T. Chapman.
Mystic Bridge, E. Frank Coates, Frank A. Coates.
Norwich, Elijah Dyer,* Elisha Phinney,* A. B. Haile,* Lewis S. Paddock, CHARLES M. CARLETON, Wm. S. C. Perkins, Patrick Cassidy, E. C. Kinney, S. L. Sprague, L. B. Almy, A. Peck, W. H. Mason, B. Roathe.
Greeneville, William Witter.
Old Lyme, George W. Harris, E. D. Griffin.
East Lyme, Elisha Munger.
Stonington, Chas. N. Brayton, Geo. D. Stanton.
North Stonington, J. D. Nelson.
—38

FAIRFIELD COUNTY.

Wm. G. BROWNSON, M.D., of New Canaan, President.

W. C. Burke, Jr., M. D., of South Norwalk, Clerk.

Censors—W. A. Lockwood, M.D., C. H. Bill, M.D., Jas. R. Cummings, M.D.

County Reporter—W. A. Lockwood, M.D.

Bridgeport, David H. Nash,* ROBERT HUBBARD, Andrew J. F. Smith, Augustus H. Abernethy, Geo. F. Lewis, James R. Cummings, Geo. L. Porter, Robert Lauder, Francis J. Young, Curtis H. Bill, N. E. Wordin, G. M. Teeple, Charles W. Sheffrey, E. T. Ward, M. G. Buesch, F. M. Wilson, T. F. Martin, W. H. Bennett, F. B. Downs.
Brookfield, A. L. Williams.*
Danbury, E. P. Bennett,* James Baldwin,* William C. Bennett, F. P. Clark, A. T. Classon.
Darien, Samuel Sands, R. L. Bohannan.
New Canaan, Lewis Richards,* Wm. G. Brownson.
Bethel, A. D. Barber.
Greenfield Hill, M. V. B. Dunham.
Norwalk, James G. Gregory, James E. Barbour, W. A. Lockwood, Jno. C. Kendall, Robert Nolan, F. V. Buesch.
South Norwalk, R. L. Higgins, John Hill, W. C. Burke, Jr.
Ridgefield, O. S. Hickok, Wm. S. Todd.
Reading, M. H. Wakeman.
Southport, C. H. Osborne.
Stratford, Edwin D. Nooney, A. S. Alling.
Stamford, N. D. Haight,* H. P. Geib.
North Stamford, Geo. W. Birch, W. H. Trowbridge.
Trumbull, Thos. Reid.
Weston, F. Gorham.
Westport, George B. Bouton, F. Powers.
Huntington, Gould A. Shelton.
Sandy Hook, Wm. C. Wyle.
Wilton, A. E. Emery.
—57

*Over sixty years of age.

WINDHAM COUNTY.

ELIJAH BALDWIN, M.D., of South Canterbury, President.

J. B. KENT, M.D., of Putnam, Clerk.

Censors—S. HUTCHINS, M.D., T. M. HILLS, M.D., E. BALDWIN, M.D.

County Reporter—LOWELL HOLBROOK, M.D.

ASHFORD, John H. Simmons.*
BROOKLYN, James B. Whitcomb.*
SOUTH CANTERBURY, Elijah Baldwin.
CHAPLIN, Orrin Witter.
HAMPTON, Dyer Hughes.*
KILLINGLY, Ashael E. Darling.
South Killingly, E. P. Morse.
West Killingly, Samuel Hutchins, R. Robinson, Thomas Graves.
East Killingly, Edwin A. Hill.
PLAINFIELD, Moosup, Wm. A. Lewis.
Central Village, Chas. H. Rogers,* E. H. Davis.
POMFRET, Lewis Williams.*
PUTNAM, H. W. Hough,* John Witter, John B. Kent, Omer LaRue, F. X. Barolet.
THOMPSON, LOWELL HOLBROOK.
North Grosvenordale, J. C. Lathrop.
Wauregan, W. H. Judson.
WESTFORD, Farnam O. Bennett.
East Woodstock, John Cotton.
West Woodstock, A. S. Leonard.
WINDHAM, E. Huntington.*
South Windham, Casper Barstow.
Willimantic, Fred. Rogers, T. Morton Hills, O. B. Griggs, C. J. Fox.

—30

LITCHFIELD COUNTY.

R. S. GOODWIN, M.D., of Thomaston, President.

W. S. MUNGER, M.D., of Watertown, Vice-President.

J. J. NEWCOMB, M.D., of Litchfield, Clerk.

Censors—L. H. WOOD, M.D., W. J. BEACH, M.D., H. W. BUEL, M.D.

County Reporter—L. H. Wood, M.D., Wolcottville.

BETHLEHEM, S. H. Huntington.
LITCHFIELD, H. W. BUEL, H. E. Gates, W. J. Beach, Wm. Deming, J. J. Newcomb.
CANAAN, C. W. Camp.
Cornwall Bridge, Elias B. Heady.
West Cornwall, Edward Sanford, I. R. Sanford.
MORRIS, Garry H. Miner.*
NEW MILFORD, J. K. Bacon.
Gaylordsville, Charles F. Couch.
GOSHEN, J. H. North.
HARWINTON, Virgil Buel, W. P. Swett.
NEW HARTFORD, Jerry Burwell.
NORFOLK, Wm. W. Welch, J. H. Stevens.
Northfield, C. L. Blake.
THOMASTON, Wm. Woodruff,* Ralph S. Goodwin, A. G. Heaney.
ROXBURY, Myron Downs.*
SALISBURY, B. S. Thompson.
Lakeville, W. Bissell, H. M. Knight.
SHARON, William W. Knight.
Wolcottville, T. S. Hanchett, L. H. Wood, J. W. Phelps.
WARREN, John B. Derrickson.
WASHINGTON, Orlando Brown.
New Preston, Edward P. Lyman.
WATERTOWN, W. S. Munger, H. P. Esterly.
WINCHESTER, West Winsted, James Welch,* John W. Bidwell.
WOODBURY, Harmon W. Shove, Francis W. Brown.
Terryville, J. H. Trent.

—40

*Over sixty years of age.

MIDDLESEX COUNTY.

R. W. MATHEWSON, M.D., of Durham, President.

J. H. GRANNISS, M.D., of Saybrook, Clerk.

Censors—S. W. TURNER, M.D., GEORGE W. BURKE, M.D., E. B. NYE, M.D.

MIDDLETOWN, Elisha B. Nye,* Geo. W. Burke, Rufus Baker,* F. D. Edgerton, Abraham M. Shew, Winthrop B. Hallock, Joseph W. Alsop, Jr., Daniel A. Cleaveland, John Morgan, James B. Olmstead, Wm. E. Fisher, C. E. Stanley, E. P. H. Griswold.
CHATHAM, Middle Haddam, Albert B. Worthington.
East Hampton, Albert Field.
CHESTER, Sylvester W. Turner.
CROMWELL, IRA HUTCHINSON.*
DURHAM, R. W. Mathewson.*
ESSEX, Alanson A. Hough,* Charles H. Hubbard, C. L. Blake.
HADDAM, Miner C. Hazen, Selden W. Noyes.
Moodus, A. W. Bell.
OLD SAYBROOK, J. H. Granniss, T. B. Bloomfield.
PORTLAND, O. A. Sears, Cornelius E. Hammond.
SAYBROOK, Deep River, Edwin Bidwell.
WESTBROOK, G. C. H. Gilbert.*
CLINTON, G. O. Johnson.
KILLINGWORTH, J. Hamilton Lee.
—32

TOLLAND COUNTY.

S. G. RISLEY, M.D., of Rockville, President.

GILBERT H. PRESTON, M.D., of Tolland, Clerk.

Censors—G. H. PRESTON, M.D., WM. N. CLARK, M.D., S. G. RISLEY, M.D.

County Reporter—S. G. RISLEY, M.D.

TOLLAND, G. H. Preston.
BOLTON, CHAS. F. SUMNER.
COLUMBIA, J. LaPierre.
COVENTRY, Maurice B. Bennett.
South Coventry, Henry S. Dean, R. H. Goodwin.
ELLINGTON, J. A. Warren.
STAFFORD, Wm. N. Clark.*
West Stafford, Joshua Blodgett.*
Stafford Springs, C. B. Newton, F. L. Smith.
VERNON — Vernon Depot, A. R. GOODRICH.
Rockville, Stephen G. Risley, Francis L. Dickinson, Frederick Gilnack.
WILLINGTON, Wm. L. Kelsey. —19

*Over sixty years of age.

REPORT OF THE COMMITTEE OF EXAMINATION.

By M. Storrs, M.D., Clerk.

During the year two sessions of the Board of Examination have been held at the Medical College, viz.: June 25, 1878, and January 30, 1879.

According to the method adopted in June, 1875, and since followed, the committee relied chiefly upon the examination papers of each candidate, together with the reported average standing in each branch of study through the term.

Pursuant to the notice given by the Dean that these papers would be in readiness for examination June 24th, in the Medical College, there were present for this purpose, on the part of the Society, C. M. Carleton, M.D., and D. A. Cleaveland, M.D., inspecting not only the papers of the candidates for graduation, but of those also in the special branches.

On the following day the Board was convened, the State Society was represented by C. M. Carleton, M.D., President; D. A. Cleaveland, M.D., G. H. Preston, M.D., J. Witter, M.D., and M. Storrs, M.D.; the College by Professors Lindsley, Sandford, Smith, White, and Wilcox.

The following gentlemen were recommended for the degree of M.D.:

E. E. Gaylord, A.B.,—Thesis, "Veratrum Viride."

John T. Gaylord, A.B.,—Thesis, "Diphtheria."

Walter J. Smith,—Thesis, "Yellow Fever."

J. M. Reily,—Thesis, "Animal Heat."

Max Mailhouse, Ph.B.,—Thesis, "The Microscope as a means of Diagnosis."

H. W. Little,—Thesis. "The Scientific Method of Diagnosis."

The following gentlemen were also examined and passed in special branches:

G. J. Augur.

G. O. Robbins.

J. C. Barker.

With a single exception the examinations were of a high order, reflecting great credit upon the scholarship of the candidates, and giving evidence that the instruction in this college is thorough, systematic, and disciplinary, and hardly second to that of any other institution in our country.

Voted, That M. Storrs, M.D., be appointed to report the proceedings of this Board to the State Medical Society.

Adjourned.

The State Committee were notified to meet January 29, 1879, at the Medical College, to inspect the examination papers. C. M. Carleton, M.D., and D. A. Cleaveland, M.D., were present on that occasion.

The Joint Committee met January 30, 1879. There were present on the part of the State Society, C. M. Carleton, M.D., President; D. A. Cleaveland, M.D., G. H. Preston, M.D., M. Storrs, M.D.; and on the part of the College, Professors Hubbard, Lindsley, Sanford, Smith, Silliman, White, and Wilcox.

The following gentlemen were recommended for the degree of M.D.:

Scott Robert Baker,—Thesis, "Lithotomy."

Eli Percival Flint,—Thesis, "Pathology of Diphtheria."

Robert Jackson Gibson, Ph.B.,—Thesis, "Placenta Previa."

Thomas Backus Jewett,—Thesis, "Temperaments."

William Snow Miller,—Thesis, "Puerperal Eclampsia."

Charles Greenville Surridge,—Thesis, "Dislocation of the Hip Joint."

James K. Thacher, B.A. (2 papers),—"Ventral Veins of Ganoids;" "Median and Paired Veins."

Nathan Peabody Tyler, B.A.,—Thesis, "Air and Ventilation."

Three other candidates were examined for degrees and rejected.

The following gentlemen were passed in the special branches:

George J. Augur.
Henry Doultiel.
George H. Hammond.
Charles H. Howland.
Alton W. Leighton, Ph.B.
Theodore R. Parker.
Charles Theodore Roberts.
William S. Russell.

Edwin E. Swift.
Leonidas C. Vinal.
William J. Wakeman, A.B.

Three gentlemen failed to pass in the special branches.

The examinations for degrees and in special branches did not reach the high average of the June examinations. Many of the candidates exhibited a lack of early education. The studies preliminary to medicine had been slighted. Mental culture and discipline were in some cases decidedly wanting. A striking contrast was furnished in the papers presented and in the examinations sustained by those who had been thoroughly educated, either in the college or in the scientific school.

We may instance the papers presented by James K. Thacher, B.A., papers of marked scientific research and interest, and which have already attracted the attention of scientific men both in this country and in Europe.

In this connection it may be proper to call the attention of this Society to the fact that, of the three rejected candidates for graduation, two were sent as gratuitous students by county associations, and there were two other county students among the graduating class; neither of them reached the required standard in their examinations, and were passed by favor.

The committee would suggest that whenever a gratuity is sought, either at the hands of the State or of the college, more regard should be had for intellectual capacity, for suitable preparation, and also for the moral fitness of the applicant.

No public exercises were held.

The Board adjourned.

REPORT

OF THE COMMITTEE TO NOMINATE PROFESSOR IN THE MEDICAL DEPARTMENT OF YALE COLLEGE.

To C. W. CHAMBERLAIN, M.D., *Sec. Connecticut Medical Society:*

At a meeting of the Joint Committee of the Connecticut Medical Society and of the corporation of Yale College, for the nomination of Medical Professors in Yale College, duly held at the room of the President of the College, June 16, 1879, on motion, it was *Voted*, That JAMES KINGSLEY THACHER, M.D., of New Haven, be nominated Professor in the Medical Department of Yale College.

Attest,

WM. DEMING, M.D.,

For the Committee.

CHARTER OF THE MEDICAL DEPARTMENT OF YALE COLLEGE.*

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

SECTION 1. The Medical Department established in Yale College, pursuant to an agreement between the President and Fellows of Yale College in New Haven, and the President and Fellows of the Connecticut Medical Society, shall be known and acknowledged by the name of THE MEDICAL DEPARTMENT OF YALE COLLEGE.

SEC. 2. There shall be established in the Medical Department such Professorships as from time to time may be determined by the President and Fellows of Yale College. There shall be a joint committee for the nomination of candidates to fill these Professorships, which committee shall be appointed in equal numbers by the President and Fellows of Yale College and the President and Fellows of the Connecticut Medical Society, and no person shall be chosen to any Professorship by said President and Directors of Yale College who shall not be approved by a majority of said committee.

SEC. 3. The Board of Examination for the Medical Degree shall consist of the Professors of the Medical Department of the College, and an equal number of the members of the Connecticut Medical Society, appointed by the President and Fellows of the same; and the President of the Medical Society shall be, *ex-officio*, President of the Examining Board; and in his absence a President *pro tempore* shall be appointed by the members chosen by the Medical Society.

SEC. 4. Candidates for the degree of Doctor of Medicine must present satisfactory evidence of having pursued medical studies for such time as the President and Fellows of Yale College may determine; must be twenty-one years of age, and of good moral character.

This degree shall be conferred by the President of Yale College, upon the recommendation of the Examining Board, and the diploma shall be signed by him and by the Examining Board, or a majority of them.

The President of Yale College may also confer the honorary degree of Doctor of Medicine upon those persons whom the President and Fellows of the Connecticut Medical Society shall recommend for that purpose;

* Enacted at January Session of Legislature, 1879.

it being understood that any power which has heretofore been possessed by said Society of introducing members to its fellowship may be exercised at their discretion.

SEC. 5. *And be it further enacted*, That if at any time after the passage of this act it shall appear to the President and Fellows of Yale College, or to the President and Fellows of the Connecticut Medical Society, or either of them, to be desirable for the cause of medical education in the said University and in the State of Connecticut that the covenant or articles of agreement, pursuant to which the relation between these two bodies corporate (referred to in the first section of this act) now exists, should be canceled and rendered of no effect, such act of dissolution may be consummated by mutual agreement between the two parties in interest, without further legislative action,—and in that event the management and control of the Medical Department shall devolve solely upon the President and Fellows of Yale College, and upon the Medical Faculty under their direction, without prejudice to any *vested* interest, contract, or endowment; and any prerogatives heretofore possessed by the Connecticut Medical Society shall revert to the same.

SEC. 6. *And be it further enacted*, That the act entitled "An Act to incorporate the Connecticut Medical Society, and to establish the Medical Institution of Yale College," and all acts in addition to, and in alteration thereof, be, and the same are hereby repealed: *provided*, that all proceedings had, and obligations imposed in pursuance of the acts hereby repealed, shall have the same effect as though said acts were still in force.

SEC. 7. This resolution may be amended or repealed at the pleasure of the General Assembly.

CHARTER AND BY-LAWS

OF THE

CONNECTICUT MEDICAL SOCIETY.

CHARTER.

General Assembly, May Session, 1870, Amending the Charter of the Connecticut Medical Society.

Resolved by this Assembly:

Section 1. That the Physicians and Surgeons now members of the Connecticut Medical Society, and all Physicians and Surgeons who shall be associated with them in pursuance of the provisions of this act, shall be and remain a body politic and corporate, by the name of The Connecticut Medical Society; and by that name they and their successors shall and may have perpetual succession; shall be capable of suing and being sued, pleading and being impleaded, in all suits of whatever name and nature; may have a common seal, and may alter the same at pleasure; and may also purchase, receive, hold, and convey any estate, real or personal, to an amount not exceeding one hundred thousand dollars.

Sec. 2. That the superintendence and management of the Society shall be vested in a body to be known and called by the name of "The President and Fellows of the Connecticut Medical Society;" which body shall have power to prescribe the duties of its officers and members, and fix their compensation; to establish the conditions of admission, dismission, and expulsion; to lay a tax from time to time upon the members, not exceeding five dollars in each year; to collect the same, and to hold and dispose of all moneys or other property belonging to the Society in such manner as they may think proper to promote the objects and interests of the Society; and in general, to make such by-laws and regulations for the due government of the Society, not repugnant to the laws of the United States or of this State, as may be deemed necessary.

SEC. 3. That the President and Fellows of the Connecticut Medical Society shall be composed of the officers of the Society for the time being, and of Fellows (not less than three nor more than five) chosen by and from each of the County Associations.

SEC. 4. That hereafter no one shall be admitted to membership, in any County Association having connection with this Society, unless he shall have received the degree of Doctor of Medicine, or have been admitted *ad eundem*, from such medical authorities as this Society shall deem proper to recognize.

SEC. 5. It shall be the duty of the several clerks of the County Associations, in their respective counties, to collect and pay over to the Treasurer of the Society all such taxes as shall from time to time be laid by the President and Fellows, upon the members of the Society as aforesaid; and for that purpose said clerks may procure a warrant, under the hand of a justice of the peace, against such member or members of the Society as shall neglect or refuse to pay the taxes so imposed upon them as aforesaid; which warrant any justice of the peace is hereby empowered to issue, and said warrant shall be directed to the sheriff or his deputies of the county in which such delinquent member or members reside; and said sheriff, or either of his deputies, on receiving such warrant, may therewith proceed to enforce the collection of such tax or taxes, in the same manner, and with the addition of the same fees, as are by law prescribed and allowed to the collectors of town taxes. And if any of the clerks of the County Associations shall neglect or refuse to collect the taxes entrusted to him to collect, by the time the same are made payable, or having collected the same shall neglect or refuse to pay the same over to the Treasurer of the Society, such Treasurer may cause a suit or suits to be instituted against such delinquent, in the name of the Society, before any court proper to try the same, and the same to pursue to final judgment; and the clerks shall be allowed and receive a compensation of five per centum on all moneys collected by them respectively, and paid to the Treasurer of the Medical Society.

SEC. 6. That these amendments shall take effect on the day of its passage; and so much of the Act entitled an Act to incorporate the Connecticut Medical Society, approved June 5, 1834, and all such acts in addition thereto and amendments thereof as are inconsistent herewith, be, and the same are hereby repealed.

Approved, July 8, 1870.

BY LAWS.

Chapter I.

Titles and Meetings.

Section 1. This Society shall be known by the name of The Connecticut Medical Society; and it shall be composed of the members of the County Associations and of Honorary Members.

Sec. 2. The Connecticut Medical Society shall hold an annual convention on the Thursday following the fourth Wednesday in May. The annual convention shall assemble alternately at New Haven and Hartford. Ten members shall constitute a quorum. If the President and Vice-President be absent, the Society may choose a President *pro tempore*.

Sec. 3. The President and Fellows of the Connecticut Medical Society shall hold an annual meeting.

Sec. 4. The County Associations shall hold in their respective counties an annual meeting.

Chapter II.

Officers.

Section 1. The officers of the Society shall consist of a President, Vice-President, Treasurer, Secretary, Committee on Matters of Professional Interest in the State, and the Presidents of the County Associations, who shall be Vice-Presidents *ex-officio*.

Sec. 2. It shall be the duty of the President to preside at the annual convention, and at all the meetings of the President and Fellows, preserve order, state and put questions, call for reports of committees, enforce the observance of the by-laws, and perform such other duties appropriate to his office as the Society shall assign him. At the annual meeting of the President and Fellows, the President shall present such matters for their consideration as he may think require attention. At the annual convention he shall deliver an address on some suitable subject.

Sec. 3. In the absence or disability of the President, the Vice-President shall preside, and in case of a vacancy in the office of President, caused by death, resignation, or removal, all the duties pertaining to it shall devolve on the Vice-President.

Sec. 4. It shall be the duty of the Treasurer to take charge and keep a correct account of all moneys belonging to the Society, together with the receipts and disbursements, and render annually to the President and Fellows a statement of all moneys received and paid by him. He shall preserve, for the benefit of the Society, all donations and other movable property committed to his charge, and keep an exact list of the same, together with the names of the respective donors. He shall not pay any money out of the treasury, nor make any investment of the funds of the Society, or change the same, but by order of the President and Secretary. And he shall deliver to his successor all books and papers, with the balance of cash or other property of the Society in his hands. The Treasurer shall be *ex-officio* a member of the Committee of Publication.

Sec. 5. The Secretary shall have charge of the records of the Society, attend all the meetings of the President and Fellows, and the annual convention of the Society, record all the transactions of the same, give true copies of them when thereto requested, conduct their correspondence, and have the custody of the seal of the Society. The Secretary shall be *ex-officio* chairman of the Committee of Publication. The Secretary shall send due notices of the annual meeting to each member, and publish notice of the same in three of the daily papers printed in this State. When definitely informed that the delegates to the American Medical Association or any State Society cannot attend, he may appoint substitutes. The Secretary shall send each year an extra copy of the published "Proceedings" of the Society to each of the Clerks, for the use of the County Associations; also to other State Societies and to Honorary Members.

Sec. 6. The Committee on Matters of Professional Interest in the State, shall consist of three, and be considered members *ex-officio* of "the President and Fellows of the Connecticut Medical Society," to be elected annually by ballot, the first named to be Chairman, whose duty it shall be, at every Annual Convention, to report the progress of our science, particularly in Connecticut—remarkable and instructive cases of disease that may have come to their knowledge—interesting facts or discoveries relating to medicine—all circumstances connected with epidemics (if any have prevailed), and the treatment adopted, whether successful or otherwise—in short, whatever influences may concern the health of the citizens of Connecticut. And the more effectually to perfect this report, it

shall be the duty of each county and other Associations represented in this Society annually to appoint one of its members as a reporter, who shall furnish to this committee, on or before the first day of May, all the information he can get relative to these subjects, within the limits of the district in which the local Association exists.

SEC. 7. Any officer of the Society may, for sufficient reasons, resign his office, or may be removed therefrom by order of the President and Fellows, for neglect, inattention or mal-conduct; in either of which cases, or on the death of any officer, the President and Fellows shall supply the office vacated as soon as may be convenient.

SEC. 8. The necessary expenses of the Treasurer, Secretary, and Chairman of the Committee on Matters of Professional Interest in the State, shall be paid.

CHAPTER III.

President and Fellows of the Connecticut Medical Society.

SECTION 1. There shall be an annual meeting of the President and Fellows of the Connecticut Medical Society, on the day preceding the annual convention of the Society, and in the same city where the convention is to be held

SEC. 2. The President, Vice-President, and *ex-officio* Vice-Presidents, Treasurer, Secretary, Committee on Matters of Professional Interest, and Fellows shall be known and called by the name of the President and Fellows of the Connecticut Medical Society; a majority of whom legally assembled together shall be a quorum for the transaction of any business; and shall have the power to make by-laws for the regulation and government of the Society, and for the promotion of the objects of the same, not repugnant to the laws of the United States or of this State; to expel any member of the Society for misconduct; to make rules for the admission of members of the Society, and for their dismission from the same; to lay a tax upon each member of the Society, not exceeding five dollars in each year; to dispose of the moneys thus raised and all other property of the Society in such a manner as they may think proper to promote the objects and interests of the Society.

The President and Fellows at any annual meeting, and after one year's nomination of every candidate, and not otherwise, may, by a major vote of those present, elect eminent physicians not resi-

dent in this State to be honorary members of this Society. But those elected shall not exceed three in number in any year.

Sec. 3. At all the meetings of the Fellows for the transaction of business, the President of the Society, or in case of his absence the Vice-President, shall preside; and in case of the absence of the President aud Vice-President, the Fellows present may elect one of their own number as President for the occasion.

Sec. 4. The President of the Society, or in case of his death or inability the Vice-President, on any special occasion, shall have power to call a meeting of the President and Fellows at such time and place as he may think proper, when applied to by any five Fellows, two of whom shall be members of different County Societies, and he shall cause notice thereof to be given by the Secretary to each member of the time and place of meeting, which notice shall be mailed at least one week previous to said meeting; and the President shall also cause twenty days' notice of the special meeting to be given in two newspapers printed in this State.

Sec. 5. The Committee of Examination, the Committee to nominate Professors in the Medical Institution, and the Committee to nominate the Physician to the Retreat for the Insane shall be chosen by ballot. Only two persons shall be elected on each of these Standing Committees each year; the first two on the list to be dropped, and the two chosen to be placed at the bottom; but any person may be re-elected. These Standing Committees of the Society shall report annually to the Presideut and Fellows, whenever they have had occasion to act in their official capacity.

The Secretary and Treasurer shall be *ex-officio* members of the Committee of Publication. This Committee shall consist of three, the other member to be chosen by ballot.

The Nominating Committee shall consist of one from every County Association represented; and the Fellows of each of said Associations respectively shall choose from among themselves one to represent them on said Committee. This Committee shall report at the time appointed for the election.

All other committees shall be appointed by the presiding officer.

Sec. 6. It shall be the duty of the Fellows of the several counties to present to the annual convention short obituary sketches of deceased members, which shall be revised, amended, or condensed by the Committee of Publication, as they deem expedient.

Sec. 7. The President shall, at any early hour of the session, appoint a Committee of three Fellows, of which the Secretary shall

be one, to be called the Business Committee, to whom all reports of cases, dissertations, or other papers designed to be read at the annual convention shall be handed. And this Committee shall examine them and recommend the manner and order in which they shall be presented to the convention.

CHAPTER IV.

County Associations.

SECTION 1. The members of the Connecticut Medical Society shall meet annually in their respective counties, and at such other times and places as have been or may hereafter be agreed upon by them; provided the annual meeting shall be at least four weeks before the fourth Wednesday in May. Each County Association shall be known and called by the name of the county in which it exists, and shall choose from among themselves a President, Clerk, and such other officers as may be found necessary. At their annual meeting they shall elect by ballot, of their own number, in each county, five, except in the county of Tolland, which shall elect three Fellows, to have part in the superintendence and management of the Society.

SEC. 2. The County Associations, in their respective counties, shall have power to adjourn meetings, and to call special meetings from time to time, as they shall deem expedient; and they may adopt such by-laws and regulations for their own government, and for the promotion of medical science, as they may think proper, not contrary to the laws of the State or the by-laws of the Connecticut Medical Society.

SEC. 3. Any person of good moral character, found to possess the qualifications prescribed by the charter and by-laws of this Society, may, by any County Association, at any meeting legally holden, be admitted to membership, by a major vote of the members present, by ballot, provided he is residing and practicing in said county, and makes application for that purpose.

SEC. 4. All persons so elected shall, within one year after such election, subscribe the by-laws of the Society, or otherwise declare in writing their assent to the same, or such election shall be void.

SEC. 5. Any County Association may, by a major vote, dismiss from the Society any member who shall remove from the State, or who shall leave the profession for other pursuits.

SEC. 6. Any County Association may, if it is deemed expedient, recommend to the President and Fellows, for dismission from

the Society, any member residing in that county who shall apply for such dismission by a written request to that effect, delivered to the Clerk of said County Association at least ten days before the time of holding any legal county meeting; and also any member who shall refuse or neglect to pay taxes; and upon the approval of such recommendation by the President and Fellows in annual meeting, the connection between such member and the Society shall be dissolved. *Provided*, that no member shall be honorably dismissed from the Society until all his taxes shall have been paid.

Sec. 7. All violation of the by-laws of the Connecticut Medical Society, or of the Medical Police adopted by the Society, or of the rules and regulations passed by the County Associations in conformity with the by-laws of the State Society, may be prosecuted and tried in the respective County Associations, under the following regulations, viz.: The member accusing another of a violation of any of the beforementioned regulations, shall make a statement, in writing, of the transaction which he deems a misdemeanor, and lay the same before a Fellow of the Society; and such Fellow shall issue a notification to the accused to appear before the next county meeting, stating the time when and the place where it is to be held, to defend, if he sees fit, against such accusation. A copy of such accusation and notification shall be left with the accused, or at his last usual place of abode, at least twelve days previous to the time of holding the next county meeting. And the accuser shall cause the said accusation and notification to be served and returned to the Clerk of the County Association, on or before the day of their sitting; and the offender, upon conviction, may be punished by admonition, by suspension from the privileges of the Society for a period not exceeding two years, or by expulsion from the Society. *Provided*, that no sentence of expulsion shall be valid until confirmed by the President and Fellows in annual meeting.

Sec. 8. When a new Clerk is chosen in any of the County Associations, his predecessor shall deliver over to him all the records and papers pertaining to the office, retaining copies of the same, if he think proper.

Sec. 9. It shall be the duty of the several Clerks of the County Associations, in their respective counties, to collect and pay over to the Treasurer of the State Society all such taxes as shall from time to time be laid by the President and Fellows upon the members of the Connecticut Medical Society. And the Clerks shall

be allowed a compensation of five per cent. on all moneys collected by them respectively and paid to the Treasurer of the State Society. *Provided*, such additional sum as the County Association may direct, not exceeding five per cent. of the moneys collected, may be retained by the Clerk to pay the expenses of the meetings of said Association.

If any members neglect or refuse to pay the taxes legally imposed upon them, it shall be the duty of the Clerks of the County Associations to which they belong to proceed against such delinquent members according to law, in the collection of the same. And if any of the Clerks of the County Associations shall neglect or refuse to collect the taxes entrusted to him to collect, by the time the same are due; or having collected the same, shall neglect to pay the same over to the Treasurer of the State Society, such Treasurer may cause suit to be instituted against such delinquent, in the name of the Society, before any Court proper to try the same, and the same pursue to final judgment. The expenses incurred by the Clerks of the County Associations in collecting taxes shall be canceled and paid by the Treasurer.

SEC. 10 The Secretary shall send to each Clerk, before the annual meeting of the County Medical Association, blanks for the returns required for the Secretary and Treasurer of the State Society. The Clerks shall return to the Secretary a true list of the officers elected at the annual meeting, all the members of the County Association, with the post-office address of each—in case of new members the *date and place of graduation should be invariably given*; the names of members who have died since the last meeting, with the name of the person appointed to write an obituary sketch; also a list of delinquent tax-payers, with the amount due from each, and all other information therein required that may be necesssary for the Secretary to make up the programme for the annual convention. This return shall be certified by the Clerk, who shall also transmit to the Secretary obituary sketches of those who have died, and all papers destined for the Transactions of the Society, or to be acted upon in convention. The blank to be returned to the Treasurer shall contain a list of the taxable members and those exempt, with the reason therefor; a list of the Fellows, and *of those claiming exemption from taxes for the first time*, if any—with the cause therefor. Also, such other facts as may be therein required, the whole return to be certified by the Clerk. Those who fail in this duty shall be subject to a fine of five dollars, to be collected by the Treasurer.

Chapter V.

Members.

Section 1. Each member of the Society shall have free access to the records of the Society, and of the County Association to which he belongs, and may take attested copies thereof if he request them.

Sec. 2. All the members of the Connecticut Medical Society have the privilege of attending all meetings of the President and Fellows, and performing all the duties of Fellows except voting. Honorary members shall have the privilege of a seat at the annual convention, and of taking part in the discussions; but they shall not vote on any question, nor be eligible to any office.

Sec. 3. The payment of the annual tax shall be optional with all members over sixty years of age.

Sec. 4. Any member of the Society who shall make, vend, or publicly recommend, or who is directly or indirectly interested in the manufacture, use, or sale of any nostrum or patent medicine, shall not be eligible to any office, and is liable to be suspended from the privileges of the Society, or to expulsion.

Sec. 5. No member of the Society shall hold professional consultation or intercourse with any other than licensed physicians and surgeons in regular standing.

Sec. 6. It shall be the duty of every member of this Society to accuse any other member of the Society for such misdemeanors as he deems contrary either to the By-Laws, Medical Police, or Rules and Regulations adopted by the Society; and the accuser shall proceed in the manner directed in chapter iv, sec. 7, of By-Laws.

Chapter VI.

Elections.

Section 1. All elections of officers of the Society shall be at the annual meeting of the President and Fellows, and by ballot; and a majority of votes shall be requisite to elect.

Sec. 2. Before the President and Fellows proceed to ballot, the Committee on Nominations shall present a list of candidates for the several officers to be elected; and, an opportunity having been given to the members to make other nominations, the Society shall then be called to ballot; if no election is obtained on the first canvass, the two highest shall be the candidates for the next balloting. When a choice is made, the persons chosen shall hold their office during one year, and until others shall be elected.

SEC. 3. The Nominating Committee shall report names for delegates to the American Medical Association, and to corresponding Societies, and shall also nominate a Committee of Arrangements, whose duty it shall be to provide convenient accommodations for the next annual convention, and an anniversary Chairman, who shall preside at the dinner of the next year. The Anniversary Chairman shall be one of the Committee of Arrangements.

CHAPTER VII.

The Society adopts the Code of Ethics of the American Medical Association as a part of its Constitution and By-Laws.

No article of the By-Laws, as now adopted, shall be altered or amended, except the subject proposed shall have been submitted in writing to the consideration of the President and Fellows at a previous annual meeting; and a vote of two-thirds of the members present in that body shall be necessary to ratify and confirm any amendment.

On the day of the annual convention, a dinner shall be provided, at the expense of those members partaking of it. Delegates from other societies, and invited guests, shall be provided for under the direction of the Committee of Arrangements.

An invitation to the dinner may be given to such eminent persons as the President of the Society, or anniversary Chairman, shall think proper to notice in this manner.

CHAPTER VIII.

Honorary Degrees and Honorary Membership.

Resolved, That the Committee on Honorary Degrees be directed to recommend none who have commenced the practice of medicine since the year 1815. *Passed, May, 1831.*

Resolved, That no member of this society shall be recommended to the President and Fellows of Yale College for the honorary degree of Doctor of Medicine until such member shall have been in the practice of medicine for a period of twenty-five years, at least, and no more than one shall be recommended from this State in any one year, and such degree shall be conferred solely on the ground of distinguished merit and honor of the individual. *The Committee on Honorary Degrees, in 1856, recommended the adoption of the above resolution, and the report of the committee was accepted.*

Resolved, That the names of candidates for the honorary degree

of Doctor of Medicine and honorary membership be published in the Proceedings of the Society, and be not acted upon for one year subsequent to the time such nominations are made. *Passed, May, 1860.*

CHAPTER IX.

Of Medical Students.

SECTION 1. Before any person can be admitted into the office of a physician, as a student of medicine, he shall furnish evidence of good moral character, and shall be examined by the preceptor and one of the Fellows of this Society; the examination to be upon the subjects of English education, and Greek and Latin languages. If found qualified, he is to receive a certificate to that effect, and be enrolled as a regular student of medicine. *Passed, May, 1847.*

SEC. 2. The following certificate of studies shall be required of all candidates for examination for a degree:

I hereby certify that ———————— has pursued the study of Medicine with me from ———————— to ———————— and that he recited regularly on [here insert the branches pursued] during the above-mentioned time.

————————, Physician.

SEC. 3. The taxes of the Fellows and dissertator *in attendance* at the Convention shall be abated. The Fellows of each county shall be a committee of abatement for that county.

SEC. 4. Each county meeting shall have power to examine and immediately expel any member notoriously in the practice of any form of quackery without any formal trial, the same to be ratified by the succeeding Convention, any by-laws to the contrary notwithstanding.

SEC. 5. That the several county meetings are hereby instructed to continue their investigations in relation to the manufacture, sale, recommendation, and use of nostrums or patent medicines, by their members, and to present for trial any member so offending.

SEC. 6. That the several county meetings be requested to investigate the subject of members of the Society consulting with irregular practitioners, and enforce the by-laws in such case made and provided.

SEC. 7. That this Society require of the several county meetings to dismiss all members who persistently refuse or neglect to pay their annual taxes. *Passed, May, 1860.*

WHEREAS, doubts have existed as to the construction of membership after absence from this State,

SEC. 8. *Resolved*, That the privileges and obligations of membership revert to a regular physician on returning to the State. *Passed, May, 1864*

PRECEDENCE OF MOTIONS IN ORDER.

WHEN A QUESTION IS UNDER DEBATE.

[CUSHING.]

1. To adjourn.
2. To lie on the table.
3. The previous question.
4. To postpone to a day certain.
5. To commit.
6. To amend.
7. To postpone indefinitely.
8. The main question.

REPORTS OF COMMITTEES.

HOW TO DISPOSE OF THEM.

When a committee is ready to report, the *first question* is whether the assembly will *receive* the report.

If the assembly, either by formal vote, or by tacit consent, permits a report to be read, the report, by such permission, is *received*, and goes to the clerk for his files—that is to say, in parliamentary language, lies on the table.

The committee, by the reading of the report, is dissolved and *discharged*, and cannot again act without new power from the assembly.

The *report* having been *received*, as above indicated, lies on the

table, and the matter may end at this point without further action being taken, or a word said.

But if the assembly wishes to discuss, or take action on, any part or the whole of a report, it can do so as soon as the report is read, or at any subsequent time, upon motion properly seconded.

Whenever a report, or any part of it, is thus taken up, it may be treated and disposed of precisely as any other proposition,—it may be allowed to stand as it came from the committee, or it may be amended in its statement, reasoning, opinion, or in its resolutions or other propositions, if it contain such—any portion being taken separately, several portions together, or the whole at once.

In whatever way the report be treated, the final question on any portion, or on the whole, as the case may be, is on acceptance, and "*when accepted it is adopted*" (Cushing, p. 151, § 295) by the assembly, and becomes the statement, reasoning, opinion, resolution, or other act, as the case may be, of the assembly, the same as it would have been had it originated in the assembly itself without the intervention of a committee.

(Though the question may be properly put on acceptance of a statement of facts, reasoning, or opinion; on agreeing to resolutions or other similar propositions; on adopting the order, or on passing or coming to the vote recommended, etc.; all these phrases are only equivalent to acceptance, which comprehends them all.)

The points then always to be remembered are, that a report is *received* by being allowed to be read; and that the whole, or any part of it, *when accepted is adopted.*

If the above exposition, strictly in accordance with Cushing and correct parliamentary usage, were constantly kept in mind by presiding officers, the deliberations of our Societies would be greatly facilitated and much confusion avoided.

CODE OF ETHICS

OF THE

AMERICAN MEDICAL ASSOCIATION.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

Article 1.—Duties of Physicians to their Patients.

Section 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge depend on their skill, attention, and fidelity. They should study, also, in their deportment, to unite *tenderness* with *firmness*, and *condescension* with *authority*, so as to inspire the minds of their patients with gratitude, respect, and confidence.

Sec. 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits should be used with discretion and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services;—none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by the physician, except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great that professional men have, under some circumstances, been protected in their observance of secrecy by courts of justice.

Sec. 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the dis-

ease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

SEC. 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so particularly alarming when executed by him that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned in their last moments. The life of a sick person may be shortened not only by the acts, but also by the words and manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

SEC. 5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty which is independent of and far superior to all pecuniary consideration.

SEC. 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence. energy, and more enlarged views in practice.

SEC. 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offense, if they are proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.—OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

SECTION 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of

comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants.

SEC. 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

SEC. 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits, and predispositions of those he attends is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is still of more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

SEC. 4. Patients should faithfully and unreservedly communicate to their physicians the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and advisor; he should alway bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

SEC. 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

SEC. 6. The obedience of a patient to the prescription of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A

failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are apt to suppose that the rules prescribed for them may be disregarded, and the consequence but too often is a relapse. Patients should never allow themselves to take any medicine whatever that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

SEC. 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

SEC. 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

SEC. 9. Patients should always, when practicable, send for their physician in the morning before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical advisers unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

SEC. 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

ARTICLE I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.

SECTION 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to

exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty as a body, and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

Sec. 2. There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

Sec. 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or hand-bills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

Article II.—Professional Services of Physicians to each Other.

Section 1. All practitioners of medicine, their wives and their children, while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully afforded. Visits ought not, however, to be obtruded officiously, as such unasked civility may give rise to embarrassments, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, requests attendance, and an honorarium be offered, it should not be declined; for no pecuniary obli-

gation ought to be imposed which the party receiving it would wish not to incur.

Article III.—The Duties of Physicians as Respects Vicarious Offices.

Section 1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and, when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglects his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

Article IV.—The Duties of Physicians in Regard to Consultations.

Section 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation when it is requested by the patient. But no one can be considered a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

Sec. 2. In consultations, no rivalship or jealousy should be indulged. Candor, probity, and all due respect should be exercised toward the physician having the case in charge.

Sec. 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inqui-

ries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for a deliberation, and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

Sec. 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

Sec. 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from considerable distance, in which latter case he may examine the patient and give his opinion in *writing* and *under seal*, to be delivered to his associate.

Sec. 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

Sec. 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

Sec. 8. Should an irreconcilable diversity of opinion occur when

several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happeu that two physicians cannot agree in their views of the nature of a case and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and if circumstances prevent the adoption of such a course, it must be left to the patient to select the physician in whom he is most willing to confide. But as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation or participation in the management of the case.

SEC. 9. As circumstances sometimes occur to render *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

SEC. 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as can be consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ARTICLE V.—DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE.

SECTION 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

SEC. 2. A physician, in his intercourse with a patient, under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

SEC. 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted

to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty, in the same illness, except in cases of sudden emergency or in consultation with the physician previously in attendance, or when the latter has relinquished the case or been regularly notified that his services are no longer desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success in the first stage of treatment affords no evidence of a lack of professional knowledge and skill.

SEC. 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

SEC. 6. It often happens in case of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

SEC. 7. When a physician is called to the patient of another practitioner,* in consequence of the sickness or absence of the latter, he ought on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

SEC. 8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no

*The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.

further than is absolutely necessary with the general plan of treatment; to assume no further directions unless it be expressly desired; and in this last case, to request an immediate consultation with the practitioner previously employed.

SEC. 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding in some degree the common funds for its support when fees are dispensed with which might justly be claimed.

SEC. 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ARTICLE VI.—OF DIFFERENCES BETWEEN PHYSICIANS.

SECTION 1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court-medical*.

SEC. 2. As peculiar reserve must be maintained by physicians towards the public in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ARTICLE VII.—OF PECUNIARY ACKNOWLEDGMENTS.

Some general rules should be adopted by the faculty in every town or district relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ARTICLE I.—DUTIES OF THE PROFESSION TO THE PUBLIC.

SECTION 1. As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially pertaining to their profession, as on subjects of medical police, public hygiene, and

legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions, in relation to the medical police of towns, or drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

SEC. 2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice on subjects strictly medical, such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post mortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

SEC. 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good office. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

SEC. 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretentions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ARTICLE II.—OBLIGATIONS OF THE PUBLIC TO PHYSICIANS.

SEC. 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so nu-

merous and important that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumption of ignorance and empiricism, to afford every encouragement and facility for the acquisition of medical education, and no longer to allow the statute books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

PRESIDENTS OF THE CONNECTICUT MEDICAL SOCIETY,

From its organization in 1792 *to the present time, and a list of the Fellows since* 1875.

Presidents.

1792.	*Leaverett Hubbard.	1856.	Benjamin H. Catlin.
1794.	*Æneas Munson.	1858.	Ashbel Woodward.
1801.	*James Potter.	1851.	*Josiah G. Beekwith.
1803.	*Thomas Mosely.	1863.	Ebenezer K. Hunt.
1804.	*Jeremiah West.	1865.	*Nathan B. Ives.
1807.	*John R. Watrous.	1866.	Isaac G. Porter.
1812.	*Mason F. Cogswell.	1867.	*Charles Woodward.
1823.	*Thomas Hubbard.	1868.	*Samuel B. Beresford
1827.	*Eli Todd.	1869.	Henry Brouson.
1829.	*John S. Peters.	1870.	Charles F. Sumner.
1832.	*William Buel.	1871.	Gurdon W. Russell.
1834.	*Thomas Miner.	1872.	Henry W. Buel.
1837.	*Silas Fuller.	1873.	Ira Hutchinson.
1841.	*Elijah Middlebrook.	1874.	Lowel Holbrook.
1843.	*Luther Ticknor.	1875.	Pliny A. Jewett.
1846.	*Archibald Welch.	1876.	A. W. Barrows.
1849.	*George Sumner.	1877.	Robert Hubbard.
1851.	*Rufus Blakeman.	1878.	C. M. Carleton.
1853.	*Richard Warner.	1879.	A. R. Goodrich.
1854.	*William H. Cogswell.		

Vice-Presidents

1876.	Robert Hubbard.	1878.	A. R. Goodrich.
1877.	C. M. Carleton.	1879.	G. L. Platt.

Secretary.

1876. C. W. Chamberlain.

Treasurer.

1876. F. D. Edgerton.

Vice-Presidents *Ex-Officio.*

1876.	1877.	1878.	1879.
Charles Carrington,	James C. Jackson,	W. A. M. Wainwright,	R. W. Griswold,
G. L. Platt,	B. H. Catlin,	S. G. Hubbard,	M. C. White,
Isaac G. Porter,	Seth Smith,	A. Woodward,	E. C. Kinney,
W. G. Brownson,	E. P. Bennett,	E. P. Bennett,	W. G. Brownson,
L. Holbrook,	Wm. A. Lewis,	John Witter,	E. Baldwin,
B. B. North,	Wm. Deming,	Wm. Deming,	R. S. Goodwin,
A. W. Hough,	E. B. Nye,	G. C. H. Gilbert,	R. W. Mathewson.
A. R. Goodrich.	M. B. Bennett.	F. L. Dickinson.	S. G. Risley.

FELLOWS.

Hartford County.

1876.	1877.	1878.	1879.
E. K. Hunt,	S. W. Rockwell,	S. W. Rockwell,	L. S. Wilcox,
J. O. Flaherty,	G. R. Shepherd,	G. W. Russell,	G. P. Davis,
S. R. Burnap,	J. O. Flaherty,	R. E. Ensign.	E. B. Lyon,
C. W. Chamberlain,	James Campbell,	N. Mayer,	N. Mayer,
G. R. Shepherd.	R. E. Ensign.	G. P. Davis.	J. N. Parker.

New Haven County.

S. C. Bartlett,	S. H. Bronson,	D. L. Daggett,	P. A. Jewett,
W. L. Bradley,	B. F. Harrison,	A. H. Churchill.	S. G. Hubbard,
L. J. Sanford,	John Nicoll,	W. H. Carmalt,	N. Nickerson,
B. H. Catlin,	S. D. Gilbert,	L. N. Beardsley,	S. D. Gilbert,
J. F. Barnett.	C. H. Gaylord.	M. N. Chamberlain.	E. L. Griggs.

New London County.

A. Woodward,	Samuel Johnson,	A. Woodward,	F. G. Stanton,
L. S. Paddock,	C. M. Carleton,	C. N. Brayton,	L. B. Almy,
G. W. Harris,	S. L. Sprague,	E. C. Kinney,	E. C. Kinney,
A. T. Nelson,	A. Woodward,	F. N. Braman,	W. M. Burchard,
W. S. C. Perkins.	F. N. Braman.	L. S. Paddock.	J. D. Nelson.

Fairfield County.

N. E. Worden,	G. L. Bouton,	J. G. Gregory,	E. J. Ward,
C. W. Sheffrey,	Jas. E. Barbour,	Jas. E. Barbour,	W. C. Wile,
G. M. Teeple,	G. F. Lewis,	Robert Lauder,	W. C. Burke, Jr.,
E. Gregory,	A. E. Emery,	N. E. Worden,	N. E. Worden,
S. Lynes.	W. A. Lockwood.	G. A. Shelton.	C. H. Bill.

Windham County.

J. B. Whitcomb,	W. A. Lewis,	J. B. Kent,	J. B. Kent,
John Witter,	E. H. Davis,	T. M. Hills,	T. M. Hills,
S. Hutchins,	E. A. Hill,	John Witter,	S. Hutchins,
C. Hosford,	Lewis Williams,	C. H. Rogers,	J. B. Whitcomb,
Wm. A. Lewis.	Elijah Baldwin.	C. J. Fox.	C. J. Fox.

Litchfield County.

1866.	1877.	1878.	1879.
J. J Newcomb,	W. W. Welch,	L. H. Wood,	E. B. Heady,
G. H. Miner,	H. M. Knight,	H. W. Buel,	J. H. Stevens,
J. H North,	J. W. Bidwell.	O. Brown,	Wm. Deming,
R. S. Goodwin,	H. E. Gates,	S. H. Huntington,	T. S. Hanchett.
V. Buel.	W. S. Munger.	T G. Wright.	W. J. Beach.

Middlesex County.

F. D. Edgerton,	Geo. W. Burke,	J. H. Granniss,	I. Hutchinson,
R. W. Mathewson,	J. W. Alsop,	M. C Hazen.	A. B. Worthington,
A. M. Shew.	E. Bidwell.	E. B. Nye.	G. C. H. Gilbert,
			S. W. Turner,
			C. E. Hammond

Tolland County.

G. H Preston,	M B. Bennett.	C. B. Newton,	S. G Risley,
S. G. Risley,	G. H. Preston.	G H Preston,	J. A Warren,
C. B. Newton	J La Pierre.	A. R. Goodrich.	Wm L. Kelsey.

Committee on Matters of Professional Interest in the State.

C. A. Lindsley, 1876–7.
W. A. M. Wainwright, 1878–9.
A. Woodward, 1876–8.
H. W. Buel, 1876–8.
L. S. Wilcox, 1879.
W. L. Bradley, 1879.

METRIC SYSTEM.

Exact Equivalents.

		Grammes.
Gr.	1 or m. 1 =	0 064
Gr.	$15\frac{432}{1000}$ =	1 00
ʒ	1 =	3 88
℥	1 =	31 10

Convenient Approximations.

		Grammes.
Gr.	1 =	0 06
Gr.	15 =	1 00
ʒ	1 =	4 00
℥	1 =	30 00

Fluids as well as solids are prescribed by weight. The decimal line is recommended instead of points to avoid error.

A teaspoonful is five grammes, a tablespoonful twenty grammes.

As the approximations for the ounce and drachm are more while the grain is less than the exact equivalent, there is no danger of giving too large doses of powerful drugs.

As the metric system is used in many books the above table may be convenient for reference.

OBSTETRICAL TABLE

By W. W. Ely, M.D., *Rochester, N. Y.*

January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
October . . .	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	*November.*
February.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				
November.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5				*December.*
March . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
December . .	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	*January.*
April . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
January . .	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4		*February.*
May . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
February.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	7	*March.*
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
March . . .	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		*April.*
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
April	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	*May.*
August . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
May	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	*June.*
September .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
June . . .	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7		*July.*
October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
July	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	*August.*
November .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
August . . .	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		*September.*
December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
September. .	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	*October.*

The duration of human pregnancy is about 275 days. This is subject to some variation, and the longest period is still undetermined. As labor occurs in the larger proportion of cases between 270 and 290 days from the last menstruation, it is usual to reckon either from the first or last day of this period, taking as the mean 280 days, or a little over nine calendar months. For this approximate calculation the first day of the menstrual period may be used, as being more readily ascertained. The table presents at a glance the beginning and end of 280 days for every day of the year. Find the date of menstruation in the upper line of the horizontal row and the figure below, with the corresponding month, will indicate 280 days. In leap year, if the period of pregnancy includes February, the time for labor will be one day earlier than that given in the table.